Sun

PRODUCT CATALOG

APRIL 1996

BETTER SOLUTIONS FOR EVERY ASPECT OF YOUR ORGANIZATION

Our network computing strategy—based on the idea that "The Network is the Computer™"—begins by uniting people, processes, and your existing equipment into an easily managed network that puts information on the desktops of the people who need it, when they need it. Sun's network-oriented product family combines the number one UNIX™ operating environment, Solaris,™ with the leading RISC architecture, SPARC,™ delivering the industry's most scalable systems for workgroups, departments, and the enterprise. As companies worldwide are shifting toward Internet/intranet-based business computing, our vision and innovative products, such as Java,™ make Sun the ideal strategic partner for enterprises looking to profit from the emerging network-driven economy. We offer the most comprehensive enterprise-management solution on the market—Solstice™—and a wide range of connectivity products to link remote offices and integrate with existing network environments. Our broad Solstice PC-Networking product line enables migration to the Internet, cost-effective management of your PC network, and technology to support mobile users. The total capability is vastly superior to proprietary LANs. And SunSoft WorkShop NEO™ provides developers with an integrated suite of powerful object-oriented tools for developing flexible, reusable three-tier client-server applications.

By consistently delivering the widest variety of innovative and affordable client-server products, as well as worldwide service and support, we've become the leader in our industry. And we can help you become the leader in yours.

These new Ultra Enterprise™ servers combine unprecedented power, networking, memory, and throughput into the most scalable line of servers in the industry today: including new workgroup, department, and datacenter server solutions. And like all Sun systems, they are binary compatible with all SPARC applications on the market today, regardless of vendor—from personal productivity applications to extremely complex technical simulations. So your business enjoys the flexibility to change and grow with the dynamics of market conditions, putting processing power—and critical information—right where it's needed, when it's needed most.

On the software side, the multiprocessing, multithreaded power of the Solaris operating environment integrates and optimizes the network, providing an infrastructure for heterogeneous distributed computing. We've also embedded Solstice Backup Single Server,™ Solstice DiskSuite,™ clustering enhancements, and Internet Gateway software in this release of Solaris, giving you superior network computing that can make your whole company more competitive.

Scalable, high-performance Solaris offers NetWare, DOS/Windows, and TCP/IP host connectivity; comprehensive system and network management; and state-of-the-art security, making it the enterprise operating environment for the future.

Sun's leadership in Internet technology is a boon for enterprises as well. More organizations use Sun servers and our robust operating environment for their Web solutions than any other. And now, it's much easier to apply Web technologies to solving problems inside your company as well as publishing on the Internet, with Sun's new Netra™ Server family. Powerful, secure, and easy to operate, Netra servers come complete, with all the software pre-installed, so they can be deployed throughout the enterprise to help you create a corporate intranet with minimal risk, effort, and expense.

Once again, the technology leader in network computing is delivering the kind of innovation you'd expect—UltraComputing.™ The UltraComputing architecture is made up of advanced technologies that establish a new level of high-performance networked computing. For organizations where raw power is critical, UltraComputing offers the supercomputing processor power of the UltraSPARC™ 64-bit CPU, combined with integrated high-bandwidth, high-speed networking, enabling you to apply compute power right where it's needed. Add to that large capacity, expandability, and powerful graphics capabilities, and the result is increased productivity for your enterprise—and faster time to market.

Complementing our revolutionary Ultra™ workstations, we've introduced the Ultra Server family, a broad line of enterprise servers that boasts industry-leading reliability, availability, and serviceability (RAS) features, security, scalability, and price/performance. To top it off, we offer new world-class, mission-critical support services and enhanced capabilities for deployment of business applications.

Of course, you expect your distributed computing systems to be up and running day in and day out, constantly working to your advantage. That's why so many businesses count on the enterprise-wide support delivered by the enterprise computing experts at SunService. SunService reinvented enterprise support, with flexible, high-value SunSpectrum services designed to further increase the success you gain from open network systems.

UltraComputing is the convergence of the best trends in network computing—optimized power, throughput, I/O performance, software, networking, and graphics in a well-engineered, affordable platform. With these UltraComputing systems, Sun delivers on the network computing promise for the visionary enterprises around the world.

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SPARCstation™ 4

- microSPARC-II™ LEVELS OF PERFORMANCE AT AN ENTRY-LEVEL PRICE
- ACCELERATED SCREEN PERFORMANCE
- BUILT-IN ADVANCED NETWORKING
- ENERGY-EFFICIENT DESIGN; QUIET OPERATION

HIGH-PERFORMANCE NETWORK COMPUTING AT PC PRICES

Driven by a 110-MHz microSPARC-II™ processor, the SPARCstation™ 4 delivers all the application performance you need in an entry-level system. Accelerated pixel performance means fills, text, and scrolling are fast. Powerful, flexible video memory augments screen speed even more, in resolutions as high as 1280 x 1024, with no degradation. With the SPARCstation 4's multitasking ability, you can run all your applications from this single desktop system—simultaneously. Built-in advanced networking lets you share files and applications. Choose just as much memory as you need: floppy-disk and CD-ROM drives, plus audio and video memory expansion options are available. The energy-efficient SPARCstation 4 automatically enters a power-save state when not in use. Quiet operations are achieved with a self-adjusted smart system cooling tool.

FEATURES + BENEFITS	DESCRIPTION
High-speed screen performance Whether you choose a 17- or 20-inch color monitor, accelerated pixel performance means fills, text, and scrolling are exceptionally fast.	Model 110 with a 110-MHz microSPARC-II processor, 17-inch entry color monitor, 32-MB memory, 1.05-GB internal SCSI-2 disk
Video memory Powerful, flexible video memory augments screen speed even more, in resolutions as high as 1280 x 1024, with no degradation.	DESCRIPTION
Multitasking By running the feature-rich, 32-bit Solaris™ operating environment, you can run your favorite UNIX, Macintosh, Microsoft Windows, and MS-DOS applications simultaneously.	Model 110 with a 110-MHz microSPARC-II processor, 17-inch color monitor, 32-MB memory, 1.05-GB internal SCSI-2 disk
Networking connectivity Advanced networking is built-in, letting you share files and applications, and access information wherever it resides.	DESCRIPTION
Cost-effective expandability Pay only for what you need. Up to 160-MB of memory expansion is available using 8- or 32-MB SIMMs. And the 10-MB/sec SCSI-2-bus connects you with up to 56-GB of mass storage.	Model 110 with a 110-MHz microSPARC-II processor, 20-inch color monitor, 32-MB memory, 1.05-GB internal SCSI-2 disk
Environmentally and ergonomically friendly The Energy Star-compliant SPARCstation 4 is designed with many energy-efficient features that cut your utility costs. Smart system cooling self-adjusts for quiet system operation.	

This is a representative sample of available configurations. For a complete listing of available configurations and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

SPARCstation™ 5

- FAST APPLICATION PERFORMANCE AND BUILT-IN NETWORKING AT AN ECONOMICAL PRICE
- COMPACT DESIGN WITH EASY EXPANDABILITY
- RANGE OF MONITOR OPTIONS
- FULL RANGE OF GRAPHICS OPTIONS

THE BEST WAY TO BOOST YOUR PRODUCTIVITY

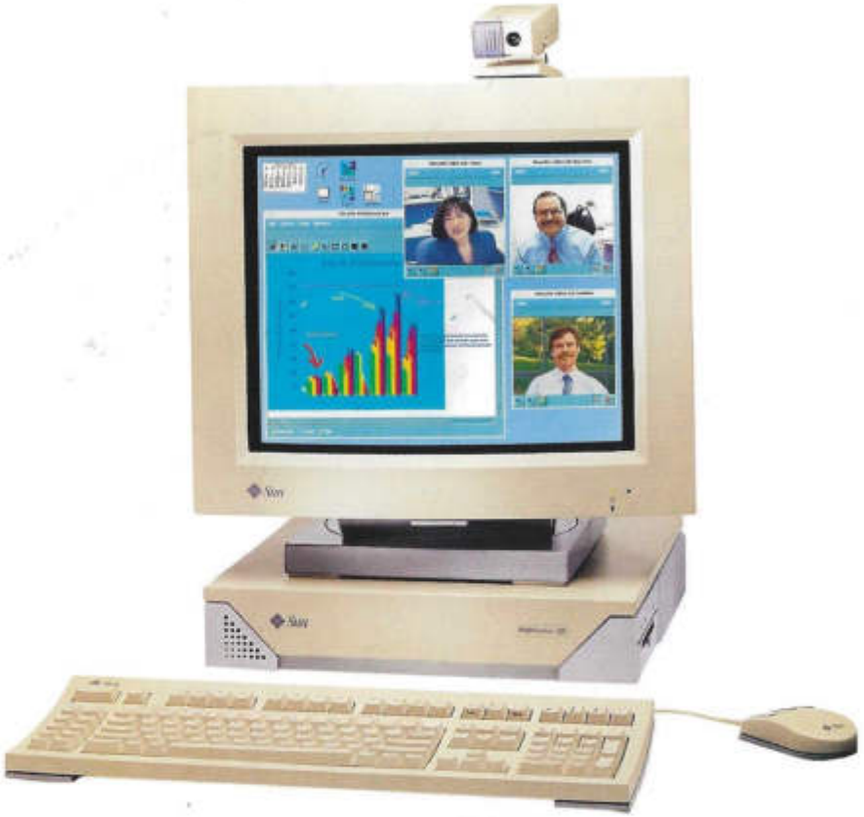
The SPARCstation™ 5 makes it easier to share text, images, audio, and video throughout the enterprise. A high-speed 110-MHz microSPARC™-II chip delivers enough horsepower to make even your most CPU-intensive applications run the way they're supposed to—fast. And with multiple configurations and a full range of graphics options to choose from, you're sure to find a SPARCstation 5 system that suits your business.

With all this functionality, it will be a while before you'll need a more powerful system. But when you do, we offer a cost-effective board upgrade to the SPARCstation 20, giving you built-in investment protection.

FEATURES + BENEFITS	DESCRIPTION
110-MHz microSPARC-II processor The highly integrated chip design and balanced hardware design delivers fast application performance.	TurboGX 8-bit accelerated 2-D/3-D color graphics workstation, 17-inch monitor, 32-MB memory, one 1.05-GB Fast SCSI-2 disk
Easy to expand Expansion options include a floppy drive, two internal hard drives, one CD-ROM, and up to 256-MB of memory. Three SBus expansion slots available for cards. The SPARCstation 5 supports up to 118-GB of disk capacity.	DESCRIPTION
Advanced graphics A full range of graphics options are available.	S24 24-bit color imaging workstation, 17-inch color monitor, 32-MB memory, one 1.05-GB Fast SCSI-2 disk
Cost-effective upgrades A simple board swap gets you faster processors and multiprocessing.	DESCRIPTION
	TurboGX 8-bit accelerated 2-D/3-D color graphics workstation, 20-inch monitor, 32-MB memory, one 1.05-GB Fast SCSI-2 disk
	DESCRIPTION
	TurboGX 8-bit accelerated 2-D/3-D color graphics workstation, 20-inch monitor, 32-MB memory, one 2.01-GB Fast SCSI-2 disk
	DESCRIPTION
	SPARCstation ZX 24-bit accelerated 3-D solids graphics system, 20-inch color monitor, 32-MB memory, one 2.01-GB Fast SCSI-2 disk

This is a representative sample of available products. For a complete listing including Multi User Packs and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

SPARCstation™ 20



- A MODULAR DESIGN MAKES IT EASY TO UPGRADE TO FASTER CPUs AND TO MULTIPROCESSING FOR UNPARALLELED PERFORMANCE
- CUTTING-EDGE 24-BIT GRAPHICS, IMAGING, AND MULTIMEDIA TECHNOLOGIES ARE FULLY INTEGRATED
- BUILT-IN NETWORKING INCLUDES INDUSTRY-STANDARD ETHERNET AND SUPPORTS TOKEN RING, FAST ETHERNET, ATM, AND FDDI

SUPERIOR COMPUTE, GRAPHICS, AND NETWORKING PERFORMANCE

Because of its modular design, the SPARCstation™ 20 can easily expand to give you better performance. Better compute performance. Better graphics performance. Better network performance. The design is also exceptionally well-balanced. As a result, these systems not only deliver high single-processor performance, they also provide the ideal framework for desktop multiprocessing. Plus, this is the first line of desktops to include accelerated 24-bit true-color image processing as a standard feature. With our revolutionary SX technology, the SPARCstation 20 delivers excellent imaging performance. Also included are fast disks, high system memory capacity, and a full complement of expansion slots so you can easily add even more graphics, video, multimedia, and advanced networking capabilities. And we offer a wide range of models and options, making the SPARCstation 20 Series the ideal desktop system for your enterprise.

FEATURES + BENEFITS	DESCRIPTION
Power up to multiprocessing Two 50-MHz MBus slots make it easy to upgrade to faster CPUs and to four-way multiprocessing.	Model 514MP with four 50-MHz SuperSPARC processors, each with 1-MB SuperCache,™ 20-inch color monitor, TurboGX 1-MB frame buffer, 64-MB memory, 1.05-GB internal Fast SCSI-2 disk
Easy expandability Four 25-MHz SBus slots provide maximum expandability for advanced graphics, multimedia, and more. Plus, serial, parallel, and fast SCSI ports let you add more mass storage and other options.	Model 71 with one 75-MHz SuperSPARC-II™ processor, with 1-MB SuperCache, 20-inch color monitor, ZX 3-D graphics frame buffer, 32-MB memory, 2.1-GB internal Fast SCSI-2 disk
Integrated SX graphics 24-bit color imaging and 2-D and 3-D graphics available.	Model 712MP with two 75-MHz SuperSPARC-II processors, each with 1-MB SuperCache, 20-inch color monitor, TurboGX 1-MB frame buffer, 64-MB memory, 2.1-GB internal Fast SCSI-2 disk
Advanced multimedia capabilities Integrated CD-quality audio, SX graphics for real-time 24-bit video playback and imaging, and optional internal CD-ROM provide state-of-the-art multimedia capabilities.	Model HS14MP with four 100-MHz hyperSPARC processors, each with 256-KB Cache, 20-inch color monitor, TurboGX 1-MB frame buffer, 64-MB memory, 2.1-GB internal Fast SCSI-2 disk
Built-in networking Twisted-pair Ethernet and AUI Ethernet (requires optional adapter cable) make it easy to connect with the entire enterprise.	Model 151 with one 150-MHz hyperSPARC processor, with 512-KB Cache, 20-inch color monitor, TurboGX 1-MB frame buffer, 32-MB memory, 1.05-GB internal Fast SCSI-2 disk
	Model 152MP with two 150-MHz hyperSPARC processors, each with 512-KB Cache, 20-inch color monitor, TurboGX 1-MB frame buffer, 64-MB memory, 2.1-GB internal Fast SCSI-2 disk

This is a representative sample of available configurations. For a complete listing of available configurations and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

Sun Ultra™ 1

- POWERED BY THE 64-BIT UltraSPARC™ MICROPROCESSOR
- ULTRA PORT ARCHITECTURE (UPA) FOR HIGH-BANDWIDTH, LOW-LATENCY DATA TRANSFERS
- VISUAL INSTRUCTION SET (VIS) FOR ACCELERATED GRAPHICS, IMAGING, & MULTIMEDIA
- TRADITIONAL 8-BIT GRAPHICS, 10-MB/SEC FAST SCSI, AND 10-Mb/SEC ETHERNET NETWORKING
- ADVANCED FAST ETHERNET 100-Mb/SEC NETWORKING TECHNOLOGY IS INCLUDED RIGHT ON THE MOTHERBOARD TOGETHER WITH 20-MB/SEC FAST/WIDE SCSI
- FULLY INTEGRATED HIGH-PERFORMANCE 24-BIT COLOR GRAPHICS WITH EVERY SYSTEM

SUN DELIVERS HIGH PERFORMANCE WITH UltraComputing™

The Sun Ultra™ 1 has established a new level of high-performance computing, UltraComputing.™ An UltraComputing platform gives you the power to create by enabling truly interactive computing through a combination of industry-leading processing power with high-bandwidth, low-latency system interconnects, high-speed networking, and exceptional visual computing performance. With the Ultra 1, you can have all of this and more.

At the heart of every Ultra 1 model is the 64-bit UltraSPARC™ microprocessor, the Ultra Port Architecture (UPA) crossbar-switched system interconnect, and the on-chip Visual Instruction Set (VIS). These advanced technologies combine to deliver the highest level of power available in its class. Choose the Ultra 1 Creator or Ultra 1 Creator3D models and receive integrated Fast/Wide SCSI, Fast Ethernet, and 24-bit true-color accelerated graphics and imaging.

Whether you are creating applications, ASICs, products, technologies, or markets, the Ultra 1 offers you all the advanced features you need to improve not only the speed, but also the quality of your work.

FEATURES • BENEFITS	DESCRIPTION
Industry-leading performance The UltraSPARC processor provides the processing power, the UPA interconnect accelerates internal data movement, and VIS technology enhances visual performance. The innovative UPA crossbar switch design enables multiple simultaneous data transfers among processor, memory, I/O, and the graphics subsystem, so latency is minimized while bandwidth is expanded well beyond that of traditional bus-based architectures. VIS, the industry's most flexible and comprehensive array of on-chip multimedia, graphics, and imaging, vastly accelerates the manipulation of these data types so your applications have a more interactive look and feel.	Model 140 with 143-MHz UltraSPARC processor, 17-inch color monitor, TurboGX 1-MB frame buffer, 32-MB memory, 1.05-GB 5400 RPM internal Fast SCSI-2 disk
	Model 170 with 167-MHz UltraSPARC processor, 20-inch color monitor, TurboGX 1-MB frame buffer, 64-MB memory, 2.1-GB 5400 RPM internal Fast SCSI-2 disk
High-performance visual computing The Ultra 1 supports the high-performance Creator and Creator3D graphics systems. The Creator and Creator3D graphics are tightly coupled with the CPU through the UPA interconnect, allowing the entire system to act as a graphics engine. State-of-the-art 3D-RAM technology provides the best features of DRAM, SRAM, and VRAM, and an on-chip ALU capable of delivering up to 600 million pixel operations per second. The UPA, 3D-RAM, and VIS combine to provide visual computing performance that is second to none.	Model 170 with 167-MHz UltraSPARC processor, 20-inch color monitor, TurboGXplus 1-MB frame buffer, 64-MB memory, 2.1-GB 5400 RPM internal Fast SCSI-2 disk
	Model 170E with 167-MHz UltraSPARC processor, 20-inch color monitor, Creator single buffer graphics, 64-MB memory, 2.1-GB 7200 RPM internal Fast/Wide SCSI-2 disk
High-performance integrated networking The high-end Ultra 1 models include integrated Fast Ethernet giving you 100-Mb/sec bandwidth for sending and receiving visual and complex data types over your network. All Ultra 1 models also support the traditional 10-Mb/sec Ethernet.	Model 170E with 167-MHz UltraSPARC processor, 20-inch color monitor, Creator3D double buffer graphics, 64-MB memory, 2.1-GB 7200 RPM internal Fast/Wide SCSI-2 disk
Binary compatibility Based on Solaris,™ the industry-leading enterprise network operating system, these systems maintain 100 percent binary compatibility with our entire product family, so you will enjoy immediate application acceleration without recompilation.	Model 170E with 167-MHz UltraSPARC processor, 20-inch color monitor, Creator single buffer graphics, 64-MB memory, 2.1-GB 5400 RPM internal Fast/Wide SCSI-2 disk, internal SunCD 4

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Sun Ultra™ 2

- THE HIGHEST LEVELS OF UltraSPARC™ PERFORMANCE ARE DELIVERED WITH THIS MULTIPROCESSING CAPABLE WORKSTATION
- FULLY INTEGRATED HIGH-PERFORMANCE 24-BIT COLOR GRAPHICS ARE STANDARD WITH EVERY SYSTEM
- ADVANCED FAST ETHERNET NETWORKING TECHNOLOGY IS INCLUDED RIGHT ON THE MOTHERBOARD

THE INDUSTRY'S MOST ADVANCED TECHNOLOGIES IN ONE MULTIPROCESSING DESKTOP SYSTEM

Sun's highest performing workstation, the Sun Ultra™ 2, combines the industry-leading 64-bit UltraSPARC™ processor in a single- or dual-processor configuration with integrated Fast Ethernet and a lightning fast Creator graphics subsystem. In addition, the Ultra Port Architecture (UPA) crossbar switched interconnect and the revolutionary on-chip Visual Instruction Set (VIS) accelerate application performance beyond what could be achieved with a faster microprocessor alone.

Even in the most compute-intensive technical and business applications, from 3-D MCAD to medical imaging, and financial modeling to simulation and analysis, this system offers all the power, multiprocessing throughput, I/O, and memory needed to deliver supercomputing performance on the desktop.

Choose between the single- or dual-processor models with Creator or Creator3D graphics. The single processor Ultra 2 can be easily upgraded to a multiprocessor simply by plugging in an additional CPU module. Both the Ultra 2 Creator and Ultra 2 Creator3D models provide powerful 24-bit true-color and outstanding geometry and imaging performance for your most advanced visual computing projects.

FEATURES + BENEFITS	DESCRIPTION
The power to create UltraSPARC multiprocessing capabilities provide the processing power, the UPA interconnect accelerates internal data movement, and VIS technology enhances visual performance. The innovative UPA crossbar switch design enables multiple simultaneous data transfers among processors, memory, I/O, and the graphics subsystem, so latency is minimized while bandwidth is expanded well beyond that of traditional bus-based architectures. VIS, the industry's most flexible and comprehensive array of on-chip multimedia, graphics, and imaging, vastly accelerates the manipulation of these data types so your applications have a more interactive look and feel.	Uni 167-MHz UltraSPARC with 0.5-MB external cache, 100-Mb Ethernet, Fast/Wide SCSI, 20-inch monitor, Creator graphics, 64-MB memory, 1x2.21-GB Fast SCSI-2 disk
Revolutionary visual computing The Creator and Creator3D graphics are tightly coupled with the CPU through the UPA interconnect, allowing the entire system to act as a graphics engine. State-of-the-art 3D-RAM technology provides the best features of DRAM, SRAM, and VRAM on one chip capable of delivering up to 600 million pixel operations per second. The UPA, 3D-RAM, and VIS combine to provide visual computing performance that is second to none.	Dual 167-MHz UltraSPARC with 0.5-MB external cache, 100-Mb Ethernet, Fast/Wide SCSI, 20-inch monitor, Creator3D graphics, 128-MB memory, 2x2.1-GB Fast SCSI-2 disk
Networking built-in Fully integrated Fast Ethernet networking provides the high-bandwidth needed for sending and receiving real-time and complex data types such as video and photorealistic images. Although the 100-BaseT technology is supported as standard, so is 10-BaseT. The Ultra 2 automatically identifies which networking technology is available and adjusts accordingly.	Uni 200-MHz UltraSPARC with 1-MB external cache, 100-Mb Ethernet, Fast/Wide SCSI, 20-inch monitor, Creator graphics, 64-MB memory, 1x2.1-GB Fast SCSI-2 disk
Binary compatibility Based on Solaris,™ the industry-leading enterprise network operating system, these systems maintain 100 percent binary compatibility with our entire product family, so you will enjoy immediate application acceleration without recompilation.	Dual 200-MHz UltraSPARC with 1-MB external cache, 100-Mb Ethernet, Fast/Wide SCSI, 20-inch monitor, Creator3D graphics, 256-MB memory, 2x2.1-GB Fast/Wide SCSI-2 disk

This is a representative sample of available configurations. For a complete listing of available configurations and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

SPARCserver™ 4

- 110-MHz microSPARC-II™ PROCESSOR
- FROM 32-MB TO 160-MB OF MEMORY
- SIMPLE AND AFFORDABLE

DESCRIPTION

Model 110 with a 110-MHz microSPARC-II processor, 32-MB memory, 1-GB Fast SCSI-2 disk

This is a representative sample of available configurations. For a complete listing of available configurations and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

SPARCserver™ 5

- 110-MHz microSPARC-II™ PROCESSOR
- FROM 32-MB TO 256-MB OF MEMORY
- EXPANDABLE AND UPGRADABLE
- THREE SBUS SLOTS

DESCRIPTION

Model 110 with 110-MHz microSPARC-II processor, 32-MB memory, 2.1-GB Fast SCSI-2 disk

DESCRIPTION

Model 110 with 110-MHz microSPARC-II processor, 32-MB memory, 2x2.1-GB Fast SCSI-2 disk, 644-MB SunCD 2Plus

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SPARCserver™ 20

- UP TO TWO 150-MHz hyperSPARC PROCESSORS WITH 512-KB OF EXTERNAL CACHE
- POWERFUL MICROPROCESSING—HANDLES MULTIPLE TASKS SIMULTANEOUSLY
- MEMORY EXPANDS FROM 32-MB TO 512-MB
- MODULAR DESIGN—EASILY UPGRADABLE AND EXPANDABLE
- FOUR SBUS SLOTS

DESCRIPTION

Model 151 with one 150-MHz hyperSPARC processor with SuperCache, 32-MB memory, 2.1-GB internal Fast SCSI-2 disk, 644-MB internal SunCD 2Plus

DESCRIPTION

Model 152 with two 150-MHz hyperSPARC processors with SuperCache, 64-MB memory, 2x2.1-GB internal Fast SCSI-2 disk, 644-MB internal SunCD 2Plus

This is a representative sample of available configurations. For a complete listing of available configurations and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

DEDICATED NETWORK RESOURCE SERVERS

Tailor the SPARCserver product family to your workgroup's specific requirements: as a file server, print server, applications server, or as a connectivity server to PC LANs. The SPARCserver™ 4 provides high-performance at a low price for all the critical application areas of your workgroup. The SPARCserver™ 5 gives you additional room to add more network connections, disk storage, or third-party options as your workgroup's needs change. The SPARCserver™ 20 offers the power of multiprocessing—more CPUs to handle multiple tasks simultaneously, whether it's separate database queries, multiple file requests, or even a multithreaded compute-intensive application.

FEATURES + BENEFITS

Solaris operating environment
Delivers the industry's best networking performance and provides a full range of system administration tools to keep your network running at peak efficiency.

Built-in flexibility
Designed to serve the varied needs of your workgroup, the Sun SPARCservers can easily be configured as dedicated file, print, application, or connectivity servers.

Interoperability and built-in networking
Transparently integrates into existing networks, and supports every major networking protocol, including ONC+, TCP/IP, NFS, IPX/SPX.

Enterprise 1

Ultra™ Server Family

- DELIVERS IMPRESSIVE PERFORMANCE WITH 143- OR 167-MHz UltraSPARC™ PROCESSOR AND 512-KB OF EXTERNAL CACHE
- BUILT-IN 10-Mb/SEC OR 100-Mb/SEC ETHERNET AND 10-MB/SEC OR 20-MB/SEC SCSI
- OFFERS TWO OR THREE SBUS SLOTS

FAST WORKGROUP PERFORMANCE, AT AN AFFORDABLE PRICE

The Ultra™ Enterprise™ 1 is the entry into Sun's new powerful Ultra Server Family of products. Built around the UltraSPARC microprocessor architecture, the Enterprise 1 brings workgroups the power of UltraComputing at an affordable price.

The Enterprise 1 delivers the compute, networking, and I/O performance small- to medium-sized workgroups need, making it an excellent choice for organizations that want to integrate their workgroups and PC LANs into the enterprise.

The system features one 143-MHz or 167-MHz processor and 512-KB of external cache. It incorporates the UltraSPARC Port Architecture (UPA), a packet-switched system bus that delivers high-speed memory transfers for fast application performance. For environments that need exceptionally high networking and I/O performance, you can choose to have Fast Ethernet and Fast/Wide SCSI standard on the motherboard.

With the Enterprise 1, you can easily and cost-effectively expand disk, memory, and networking connections to adapt to meet the needs of today's constantly changing work environment. And with its compact desktop packaging, the Enterprise 1 fits into your existing work environment, and can easily be stacked or rack-mounted.

FEATURES & BENEFITS	DESCRIPTION
Highly balanced, high-performance, high-capacity The UltraSPARC architecture optimizes every area of the system including I/O, memory, networking, and CPU to run advanced client-server applications and deliver fast application performance.	143-MHz UltraSPARC processor with 10-MB/sec Fast SCSI, 10-Mb Ethernet, 32-MB memory, 2.1-GB Fast SCSI-2 disk, and SunCD 4
Binary compatibility 100 percent binary compatible and based on Solaris, the industry-leading enterprise network operating system, to ensure that your current applications run efficiently.	DESCRIPTION
Interoperable Secure and network-ready to easily integrate into and manage heterogeneous environments from large enterprises and mainframes and terminals to small workgroups with NetWare-based PCs, Macintoshes, and workstations.	167-MHz UltraSPARC processor with 10-MB/sec Fast SCSI, 10-Mb/sec Ethernet, 64-MB memory, 2.1-GB Fast SCSI-2 disk, and SunCD 4
Reliability and robustness Brings reliability, robustness, and security to workgroups or PC LANs.	DESCRIPTION
	167-MHz UltraSPARC processor with 20-MB/sec Fast/Wide SCSI, 100-Mb/sec Fast Ethernet, 64-MB memory, 2x2.1-GB Fast/Wide SCSI-2 disk, and SunCD 4

This is a representative sample of available configurations. For a complete listing of available configurations and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

New

Enterprise 2

Ultra™ Server Family

- IDEAL AS AN APPLICATION, COMPUTE, OR HIGH-PERFORMANCE FILE SERVER
- POWERFUL, SCALABLE MULTIPROCESSING IN A COMPACT PACKAGE
- ENTERPRISE-WIDE CONNECTIVITY AND INTEROPERABILITY
- RELIABLE, ROBUST, SECURE
- EASILY EXPANDABLE AND UPGRADABLE FOR FUTURE GROWTH
- HIGH-THROUGHPUT, HIGH-CAPACITY
- EASY TO MANAGE

THE POWERFUL MULTIPROCESSING WORKGROUP SERVER

Whether you're looking for an application server for your medium to large workgroups or a compute server for your most demanding applications, the Ultra™ Enterprise™ 2 is the perfect fit. Providing powerful multiprocessing and high-speed networking, the Enterprise 2 delivers high-performance to client-server applications—and that means maximum workgroup productivity through faster database, networking, and multiuser performance. This multiprocessing powerhouse provides the high capacity demanded by large workgroup work loads and is easily expandable by simply adding more processing power, memory, or disks. So it's ready to grow as the needs and/or size of your workgroup grows.

All aspects of the Enterprise 2 system have been enhanced to provide maximum performance. Built around a powerful UltraSPARC processor running at 167- or 200-MHz, the system can accommodate up to two processors, each with a large external cache. The Enterprise 2 boasts 100-Mb per second Fast Ethernet and comes standard with Fast and Wide SCSI for increased I/O throughput. The Enterprise 2 comes through for your workgroup's capacity needs by supporting vast amounts of data with large memory, I/O, and external disk capacity. Just the kind of balanced performance you'd expect from Sun's highest performing workgroup server.

As with all Sun systems, the Enterprise 2 runs Solaris, the industry's leading UNIX operating environment, with more than 10,000 applications available today. Solaris supports every major networking protocol, including ONC+, TCP/IP, NFS, and IPX/SPX, allowing the Enterprise 2 to seamlessly integrate into existing environments. And with Solstice AdminSuite,™ Solstice DiskSuite,™ and Solstice Backup™ products, which all come bundled with the Enterprise 2, you can easily manage your workgroup.

FEATURES & BENEFITS

New levels of performance for workgroups
The robust multiprocessing Enterprise 2 provides unmatched workgroup performance, with up to two 64-bit UltraSPARC processors running at 167- or 200-MHz, each with 512-KB or 1-MB external cache. Also standard on the Enterprise 2 is 100-Mb/sec Fast Ethernet, and 20-MB/sec Fast and Wide SCSI. An extra wide memory path provides fast memory access.

High-capacity
With 16 memory slots for up to 2-GB of memory, four I/O slots, and two internal disk drive bays, the Enterprise 2 has plenty of capacity for your workgroup. Coupled with SPARCstorage Arrays, the Enterprise 2 can support up to a terabyte of data.

Simple expandability
The modular design of the Enterprise 2 makes it easy for you to add and upgrade CPUs, memory, and disks, so it grows along with you.

Reliable, secure, and easy to manage
Built upon the Solaris operating environment, the Enterprise 2 provides the reliability and security you need for running your workgroup applications. And with Solstice and SolarNet products, you can easily integrate and manage your workgroups and PC LANs.

This is a representative sample of available configurations. For a complete listing of available configurations and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

DESCRIPTION
One 167-MHz UltraSPARC processor with 20-MB/sec Fast/Wide SCSI, 100-Mb/sec Fast Ethernet, 128-MB memory, 2x2.1-GB Fast/Wide SCSI-2 disk, and SunCD 4
DESCRIPTION
One 200-MHz UltraSPARC processor with 20-MB/sec Fast/Wide SCSI, 100-Mb/sec Fast Ethernet, 128-MB memory, 2x2.1-GB Fast/Wide SCSI-2 disk, and SunCD 4
DESCRIPTION
Two 167-Mhz UltraSPARC processors with 20-MB/sec Fast/Wide SCSI, 100-Mb/sec Fast Ethernet, 256-MB memory, 2x2.1-GB Fast/Wide SCSI-2 disk, and SunCD 4
DESCRIPTION
Two 200-MHz UltraSPARC processors with 20-MB/sec Fast/Wide SCSI, 100-Mb/sec Fast Ethernet, 512-MB memory, 2x2.1-GB Fast/Wide SCSI-2 disk, and SunCD 4

New

Enterprise 150

Ultra™ Server Family

- HIGH I/O PERFORMANCE, FAST SYSTEM THROUGHPUT, AND PROCESSING POWER
- HIGHLY INTEGRATED FEATURES
- SUPERIOR RELIABILITY, AVAILABILITY, SERVICEABILITY—AND AFFORDABILITY

RELIABILITY, PERFORMANCE, AND INTEGRATION FOR YOUR WORKGROUP APPLICATIONS

The Ultra™ Enterprise™ 150 tower delivers a complete, reliable network server solution with high I/O performance, fast system throughput, and advanced network and application server capabilities that today's workgroups demand.

With built-in networking capabilities, the Enterprise 150 supports increased throughput and reliability for your workgroup. Featuring our 167-MHz UltraSPARC™ processor, 100-Mb/sec Fast Ethernet, and 20-MB/sec fast/wide SCSI-2, this system comes with ECC-protected memory and an internal disk array with 12 hot-pluggable disks supporting RAID 0, 1, and 5. A comprehensive network server solution, the Enterprise 150 integrates easily into heterogeneous environments and delivers the performance needed to drive the applications your workgroup depends on every day—Lotus Notes, e-mail, file and print services, and of course, databases such as Oracle, Informix, and Sybase.

With the Enterprise 150, it is easy to manage any PC client using the simple graphical interface of Solstice™ PC-Networking. Even Novell NetWare clients can have quick access to the applications, peripherals, and network integrated by this server. In addition, the Enterprise 150 runs the Solaris operating environment, the industry's leading UNIX™ solution, with more than 10,000 applications available today. Robust, scalable, and secure, the Enterprise 150 comes bundled with Solstice AdminSuite,™ Solstice DiskSuite,™ and Solstice Backup™ software, delivering leading network management in the industry.

Consistently rated among the leaders in customer satisfaction, SunService™ is there for you 24 hours a day, seven days a week, with mission-critical support and expert IT consulting. Enterprise 150. Your workgroup's reliable, integrated, powerful, network-ready server solution.

FEATURES + BENEFITS

Superior networking
Normally found only on higher-end systems, the Ultra Enterprise 150 boasts 100-MB/sec Fast Ethernet and 20-Mb/sec Fast/Wide SCSI-2. And it easily integrates with industry-standard networks such as ONC+, TCP/IP, DEC, and NetWare.

Built-in expandability
The Enterprise 150 can grow with your workgroup, with 25-GB internal storage, up to 512-MB of ECC-protected memory, and two available SBus slots to meet your expansion needs.

Reliable and manageable
With Solaris Workgroup Server License—which includes Solstice AdminSuite, Solstice DiskSuite, and Solstice Backup—the Enterprise 150 makes it easy for system administrators to manage your network more efficiently, while you can rest assured your data is safe.

DESCRIPTION

Entry systems include 167-MHz UltraSPARC processor with 20-Mb/sec Fast/Wide SCSI and 100-BaseT for networking, 32-MB memory, 512-KB external cache, one 2.1-GB Fast SCSI-2 disk and one quad SCSI speed 644-Mb CD-ROM

The Enterprise 150 offers a configure-to-order process for memory network cards and disk options. These options will be pre-installed to meet your exact requirements. For complete product and pricing information, please contact your local Sun sales office or authorized Sun reseller.

New

Enterprise 3000

Ultra™ Server Family

- AN AFFORDABLE SYSTEM FOR DEPLOYING DEPARTMENTAL BUSINESS APPLICATIONS
- DELIVERS PERFORMANCE AND RELIABILITY PREVIOUSLY AVAILABLE ONLY IN LARGE-SCALE SYSTEMS
- TOWER PACKAGE DESIGNED FOR OFFICE SETTINGS
- EASY TO EXPAND AS YOUR BUSINESS GROWS
- HIGHLY SOPHISTICATED RELIABILITY, AVAILABILITY AND SERVICEABILITY FEATURES

AN AFFORDABLE SERVER WITH UNPRECEDENTED POWER AND RELIABILITY

For running the new generation of network-based business programs—SAP R/3, Oracle Financials, PeopleSoft Human Resources—you need application servers with tremendous network throughput and processing power. Plus very high levels of availability. The Ultra™ Enterprise™ 3000 is the first server to offer all that in a compact, easily affordable package.

The Enterprise 3000 is well suited for business-critical applications because it gives you all of the industry-leading reliability features found in our high-end servers. The ability to tolerate power-supply failures with no system disruption. The ability to service most components while the system continues to run. Even the ability to predict potential failures with Solstice™ SyMON,™ a system monitor that will automatically warn the system administrator and SunService personnel so preventive action can be taken.

These reliability features—unique for systems in this price class—are not available even in most large-scale systems.

As an application server, the Enterprise 3000 delivers unprecedented performance. It unites the power of up to six UltraSPARC™ processors, the fast I/O of our 2.6-GB/sec Gigaplane™ system interconnect, high-bandwidth networking, high-speed disk I/O, and up to 6-GB main memory. Its modular design means that you can continue to upgrade the performance of the system. Add more CPUs, I/O channels, and memory as needed. Incorporate new technologies as they become available. This system delivers true investment protection.

FEATURES & BENEFITS

Unmatched application performance
High-performance technologies, such as UltraSPARC and the Gigaplane system bus, deliver unprecedented levels of performance for business applications.

Powerful and affordable
In addition to industry-leading application performance, the simple architecture and compact design make this system a leader in price/performance.

Superior reliability
Built-in hot-pluggable disks and redundant power and cooling are just some of the reliability features that set a new standard for availability in a mid-range system.

Modular packaging
Our superior system design allows you to easily add CPU, memory, I/O, disk capacity—including future technologies—as your business grows.

Comprehensive service
A broad range of support, consulting, and training options are available from SunService, which is rated among the leaders in customer satisfaction.

DESCRIPTION

Entry systems include 167-MHz UltraSPARC processor with 512-KB external cache, 64-MB memory, one 2.1-GB or 4.2-GB hot-pluggable SCSI disk, an I/O board for SBus expansion and graphics, CD-ROM, and an unlimited user Solaris server license

Due to the expandability of the Enterprise 3000 we have a flexible ordering process to allow you to configure your server to your exact requirements. Please contact your local Sun sales office or authorized Sun reseller.

New

Enterprise 4000

Ultra™ Server Family

- EXPANDABLE YET COMPACT DEPARTMENTAL SERVER FOR DATABASE AND BUSINESS APPLICATIONS
- SUPERIOR SCALABLITY IN COMPUTE AND I/O PERFORMANCE
- ALL MAJOR COMPONENTS ARE INTERCHANGEABLE WITH HIGH-END DATACENTER SYSTEMS FOR EASY UPGRADING AND INVESTMENT PROTECTION
- INCREASE CAPACITY COST-EFFECTIVELY TO A LEVEL WHICH EXCEEDS MOST MAINFRAME SYSTEMS
- DELIVERS INDUSTRY-LEADING RELIABILITY, AVAILABILITY, AND SERVICEABILITY WITH FEATURES SUCH AS REDUNDANT, HOT-SWAP SYSTEM COMPONENTS

A VERSATILE SERVER WITH EXCEPTIONAL VALUE AND SCALABILITY

The Ultra™ Enterprise™ 4000 server lets you purchase just the amount of computing capacity you need today—then cost-effectively expand that capacity to a level that exceeds most mainframe systems.

Its unique multiprocessing design enables you to increase computational power and I/O throughput via low-cost modular upgrades. And the highly efficient, multithreaded Solaris™ operating environment ensures that users achieve near linear increases in performance as more CPUs and I/O channels are added to the server. The Enterprise 4000 can scale to support extremely I/O-intensive workloads because the Gigaplane,™ our 2.6-GB/sec system interconnect, delivers more than twice the I/O throughput of competing systems.

Providing the flexibility to adapt to rapidly increasing computing workloads, the Enterprise 4000 can support up to 14 high-speed UltraSPARC™processors, 14-GB memory, and 14 200-MB/sec I/O channels.

It is ideal for business-critical applications because it offers all of the industry-leading reliability features found in top-of-the-line Enterprise 5000 and Enterprise 6000 servers, including the ability to tolerate power-supply failures with no system disruption. Its hot-swap components can be serviced while the system continues to run. In addition, the Solstice™ SyMON™ system monitor can predict potential failures, and automatically warn the system administrator and SunService personnel so components can be replaced before they fail.

FEATURES & BENEFITS	DESCRIPTION
System monitoring for greater uptime Solstice™ SyMON™ monitors system status, provides hardware failure prediction capabilities, and enables faster problem diagnosis—all leading to greater system uptime.	Entry systems include 167-MHz UltraSPARC processor with 512-KB external cache, 64-MB memory, an I/O board for SBus expansion and graphics, CD-ROM, and an unlimited user Solaris server license
Expandability It's easy and affordable to increase system capacity and performance. Processors on daughtercards, memory, and I/O quickly plug in so you can support more users and deliver greater application performance.	
High-bandwidth networking and I/O SBus I/O boards offer 400-MB/sec throughput, on-board Fibre Channel, on-board SunFastEthernet,™ and optional ATM for unprecedented networking and I/O performance.	
Investment protection Sun protects your investment in sophisticated business applications by ensuring that your existing applications will run on the new UltraSPARC servers.	
Comprehensive service The Enterprise 4000 is backed by SunService, which is there for you 24 hours a day, seven days a week, with mission-critical support and expert IT consulting.	

Due to the expandability of the Enterprise 4000 we have a flexible ordering process to allow you to configure your server to your exact requirements. Please contact your local Sun sales office or authorized Sun reseller.

New

Enterprise 5000

Ultra™ Server Family

- HIGH-PERFORMANCE DATACENTER SYSTEM DESIGNED FOR ENTERPRISE-WIDE APPLICATIONS
- HOT-SWAP SYSTEM COMPONENTS AND ON-LINE MAINTENANCE DELIVER IMPROVED UPTIME
- UNIQUE MODULAR PACKAGING ASSURES THAT ADDING CAPACITY IS BOTH COST-EFFECTIVE AND EASY
- ABLE TO SCALE COMPUTE AND I/O PERFORMANCE AS YOUR NEED FOR NETWORK COMPUTING RESOURCES GROW

A SCALABLE AND RELIABLE SERVER FOR MISSION-CRITICAL APPLICATIONS

With features previously available only in proprietary fault-tolerant and mainframe systems, the Ultra™ Enterprise™ 5000 server gives you the industry's most comprehensive set of uptime features.

The highly integrated system design dramatically reduces component count relative to conventional network servers, making it inherently reliable. With built-in redundancy, the Enterprise 5000 can tolerate power, cooling, or storage failures without affecting system operation—and can automatically recover from most other failures, such as CPU faults, with minimal disruption. The main system components are hot-swappable so they can be replaced while the system is on-line. And the server's integrated system monitor, Solstice™SyMON,™ can even predict failures before they occur, so a component can be replaced before it fails.

Optimized to provide extremely high I/O throughput, the Enterprise 5000 provides exceptional performance for demanding network-based business applications. In fact, the Gigaplane,™ our 2.6-GB/sec system interconnect, delivers more than twice the I/O capacity of competing systems. Connected to the Gigaplane are up to 14 high-speed UltraSPARC™ processors, 14-GB memory, and 14 200-MB/sec I/O channels. This design, combined with the multiprocessing efficiency of the Solaris™ operating environment, means the Enterprise 5000 can support more than a thousand network clients doing heavy transaction processing, as well as data warehouses with more than a terabyte of data.

FEATURES & BENEFITS	DESCRIPTION
The future is built-in Sun designed the Enterprise 5000 to incorporate new technologies in the coming years while protecting the investment you have made in existing hardware and software.	Entry systems include 167-MHz UltraSPARC processor with 512-KB external cache, 64-MB memory, an I/O board for SBus connectivity, CD-ROM, and an unlimited user Solaris server license
Exceptional uptime Hot-swap system components allow on-line maintenance and the ability to expand capacity with minimal system disruption.	
Expandability As your business grows and your need for greater computing power increases, this system offers exponential growth in CPU, memory, I/O, and disk.	
Unmatched performance For running network-based business applications—such as SAP R/3, Oracle Financials, and PeopleSoft Human Resources—the Enterprise 5000 provides a new level of performance with its UltraSPARC processors, Gigaplane system bus, and streamlined memory architecture.	
Comprehensive service SunService, consistently rated among the leaders in customer satisfaction, delivers mission-critical support, customized system and network management services, and IT consulting.	*Due to the expandability of the Enterprise 5000, we have a flexible ordering process to allow you to configure your server to your exact requirements. Please contact your local Sun sales office or authorized Sun reseller.*

New

Enterprise 6000

Ultra™ Server Family

- OUR MOST SCALABLE AND EXPANDABLE SMP SYSTEM
- HIGH-PERFORMANCE ARCHITECTURE IS IDEAL FOR DATA WAREHOUSING, LARGE-SCALE OLTP, AND ENTERPRISE-WIDE APPLICATIONS
- SCALE TO UNPRECEDENTED LEVELS OF I/O PERFORMANCE
- UNIQUE RELIABILITY, AVAILABILITY, AND SERVICEABILITY DELIVER NEW HIGHER LEVELS OF UPTIME REQUIRED IN MISSION-CRITICAL ENVIRONMENTS
- MODULAR DESIGN ENABLES UPGRADING TO FUTURE TECHNOLOGIES FOR CONTINUED INDUSTRY-LEADING PERFORMANCE AND SUPERIOR INVESTMENT PROTECTION

LEADING SCALABILITY AND PERFORMANCE FOR LARGE-SCALE DATABASE APPLICATIONS

The Ultra™ Enterprise™ 6000 server enables you to build network computing applications of a size and scale that previously required mainframes. You get the benefits of improved data access and flexibility even as your databases grow to multiple terabytes.

What makes this possible is a design optimized for extremely heavy I/O throughput. At the heart of the Enterprise 6000 is the Gigaplane,™ a 2.6-GB/sec system interconnect with more than twice the I/O capacity of competing systems. Connected to the Gigaplane are up to 30 high-speed UltraSPARC™ processors, 30-GB memory, and 30 200-MB/sec I/O channels. Combine that with the multiprocessing efficiency of the Solaris™ operating environment, and the Enterprise 6000 will support thousands of network clients doing transaction processing. It can even handle data warehouses with multiple terabytes of data.

To provide extremely high levels of uptime, the Enterprise 6000 incorporates the most comprehensive set of reliability features available today in a network server. It comes with Solstice™ SyMON,™ an integrated system monitor than can predict many common failures before they occur. If you choose, SunService will respond to any "prefailure" warning by automatically dispatching service personnel to repair the system before there is a problem. The system also has built-in redundancy so it can tolerate power, cooling, or storage failures without affecting system operation and can automatically recover from most other failures, such as CPU faults, with minimal disruption.

FEATURES & BENEFITS

New system architecture for high availability
Designed for mission-critical environments, this architecture has fewer, more reliable components, redundant hot-swap power and cooling, as well as Solstice™ SyMON™ for hardware failure prediction.

Scalability
Companies now have the ability to deploy extremely large-scale applications in a network-based environment. This system scales in processing and I/O performance to handle the largest data warehousing and on-line transaction processing applications.

Mainframe-class I/O
New technologies, including the high-bandwidth Gigaplane™ system bus and the symmetric I/O architecture, yield the power previously found only in mainframe systems.

Mission-critical support
SunService gives your enterprise access to the industry's most knowledgeable UNIX® and multivendor experts and comprehensive services. The new Platinum level offering from SunService delivers the highest level of support including guaranteed response times, 7x24 hour support and proactive system monitoring.

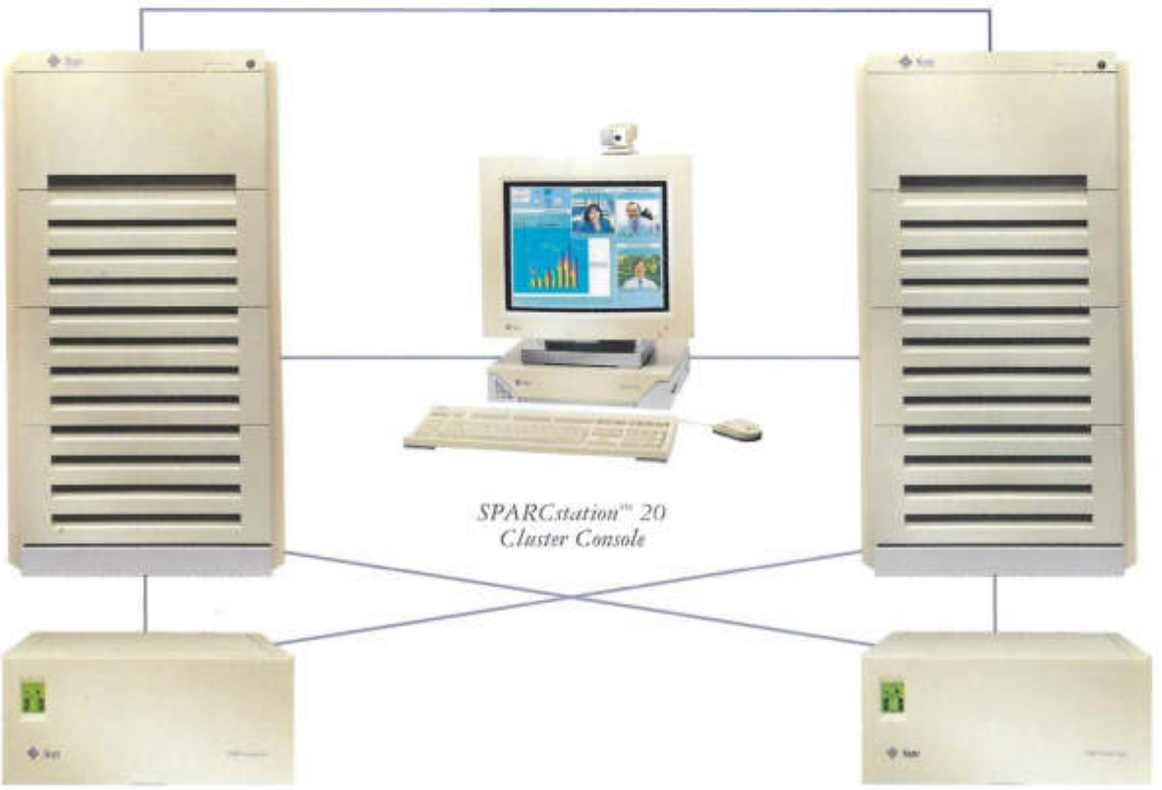
DESCRIPTION

Entry systems include 167-MHz UltraSPARC processor with 512-KB external cache, 64-MB memory, an I/O board for SBus connectivity, CD-ROM, and an unlimited user Solaris server license

Due to the expandability of the Enterprise 6000 we have a flexible ordering process to allow you to configure your server to your exact requirements. Please contact your local Sun sales office or authorized Sun reseller.

SPARCcluster™ product family

- SPARCcluster™ PRODUCTS FOR HIGH-AVAILABILITY DATA SERVICES
- FULLY REDUNDANT COMPONENTS ELIMINATE DOWNTIME DUE TO HARDWARE OR SOFTWARE FAILURE
- OFF-THE-SHELF FAULT MANAGEMENT SIGNIFICANTLY REDUCES CUSTOMER DEVELOPMENT REQUIREMENTS
- FAIL FAST DEVICE DRIVERS ENSURE DATA INTEGRITY IN CLUSTERED ENVIRONMENTS
- SUPPORTS THE SPARCstorage™ ARRAY 100 AND 200 SERIES, SUN'S HIGH-AVAILABILITY DISK SUBSYSTEMS
- CLUSTER CONSOLE PROVIDES A COMPREHENSIVE, SINGLE POINT OF CLUSTER ADMINISTRATION
- COMPATIBLE WITH EXISTING NETWORK CLIENTS AND CLIENT APPLICATIONS
- HIGH-AVAILABILITY GROWTH PATH THAT PRESERVES YOUR INVESTMENT IN HARDWARE AND SOFTWARE
- SUPPORT FOR TWO-NODE SPARCcluster CONFIGURATIONS
- SUPPORT FOR SPARCserver™ 20, SPARCserver™ 1000E, SPARCcenter™ 2000E PLATFORMS



SPARCcluster™ SERVERS MEET ENTERPRISE COMPUTING REQUIREMENTS FOR HIGH AVAILABILITY

The SPARCcluster product family offers three clustered computing platforms that deliver high availability for your enterprise environments. The SPARCcluster HA Server supports failover between cluster nodes and offers the industry's most sophisticated, off-the-shelf, application-level fault management for NFS,™ Informix, Oracle, and Sybase environments.

The SPARCcluster PDB Server allows you to add support for Oracle Parallel Server to the highly available SPARCcluster platform, complete with a kernel-level distributed lock manager and shared concurrent access to disk.

SPARCcluster products support Sun's SPARCserver™ 20, SPARCserver™ 1000E, SPARCcenter™ 2000E, and SPARCstorage™ Arrays, preserving your investment in existing systems.

By packaging installation, training, support, and consulting with each SPARCcluster sale, Sun provides you with a complete solution to your high-availability needs.

FEATURES + BENEFITS	DESCRIPTION
SPARCcluster HA Server • High-availability data services • Comprehensive fault management for Sun hardware and software • Application-level fault management for NFS, Informix, Oracle, and Sybase • Automatic IP failover on FDDI and Ethernet (10/100) networks • Fully automatic recovery from all single points of failure	SPARCcluster HA Server, two SS1000E cluster-ready nodes, one HA Cluster Foundation Package with two unlimited use Solstice™ HA software licenses, one HA Support Package
SPARCcluster PDB Server • High-availability platform for parallel database computing • Comprehensive fault management for Sun hardware and software • Application-level fault management for Oracle Parallel Server • Distributed Lock Manager • Shared Access Volume Manager • Fully automatic recovery from all single points of failure	SPARCcluster HA Server, two SC2000E cluster ready nodes, one HA Cluster Foundation Package with two unlimited use Solstice HA software licenses, one HA Support Package
	SPARCcluster PDB Server, two SS1000E cluster-ready nodes, one PDB Cluster Foundation Package with two unlimited use Solstice PDB software licenses, one SPARCcluster Support Services Package
	SPARCcluster PDB Server, two SC2000E cluster-ready nodes, one PDB Cluster Foundation Package with two unlimited use Solstice PDB software licenses, one SPARCcluster Support Services Package

This is a representative sample of available configurations. For a complete listing of available configurations and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

SPARCserver™ 1000E

A COMPACT, SCALABLE, AFFORDABLE DEPARTMENTAL SERVER

This powerful, affordable system extends mainframe-capacity computing to your department, giving you the power to streamline business processes, offer new services, and be more responsive to your customers. The system's high-performance Solaris™ operating environment includes multithreading capabilities, which can speed single applications by dividing them to run in parallel among several processors. Add more processing power to your system simply by plugging in a new card. This same modular approach applies to memory and I/O, so the SPARCserver™ 1000E can easily grow to meet your changing needs.

The SPARCserver 1000E maximizes reliability, availability, and serviceability with highly integrated long-life components, parity protection on all data paths, and extensive system monitoring. In the unlikely event of a processor, memory chip, or I/O bus problem, Automatic System Recovery quickly isolates the component and reconfigures the system around it. If a disk drive malfunctions, Solstice DiskSuite™ software protects the integrity of your files.

- **AN AFFORDABLE WAY TO BRING MAINFRAME-CAPACITY COMPUTING TO YOUR DEPARTMENT**
- **MULTIPROCESSING DELIVERS BETTER THROUGHPUT FOR MULTIPLE USERS AND APPLICATIONS**
- **FLEXIBLE MODULAR DESIGN LETS YOU EASILY ADD PROCESSORS, MEMORY, AND I/O**
- **CHOOSE FROM MORE THAN 10,000 SOLUTIONS AVAILABLE FOR THE SPARC® PLATFORM, INCLUDING INDUSTRY-LEADING DATABASES, THE TOP 4GLs, AND THE STANDARD DEVELOPMENT ENVIRONMENT MicroFocus COBOL FOR POPULAR BUSINESS APPLICATIONS**
- **DESIGNED FOR RELIABILITY, AVAILABILITY, AND SERVICEABILITY**

FEATURES + BENEFITS	DESCRIPTION
Superior networking The SPARCserver 1000E easily integrates with industry-standard networks such as ONC™, NFS™, IPX/SPX, DECnet, and IBM.	Entry systems include two 85-MHz SuperSPARC+ processors with 1-MB external cache each, 32-MB memory, 2.1-GB internal Fast SCSI-2 disk, and unlimited user Solaris RTU server license
Simplified interoperability with heterogeneous networks Solstice™ SunNet Manager™ software helps tie all your networks together, whether they're located within one building or span the globe.	
Easy to expand When you need more CPU power, simply add SuperSPARC™ processors— two per system board, up to a total of eight. For faster completion of large, compute-intensive tasks, you can install up to 2-GB of memory. Up to 33.6-GB of internal disk space fits in one compact system while hundreds of gigabytes are supported using a SPARCstorage™ Array subsystem.	
Modular upgrades Plug-in SPARC™ modules provide easy, cost-effective upgrades that enable you to maximize your investment.	
Unmatched scalability The XDBus™ offers exceptional bandwidth, ensuring the maximum performance from today's SPARC processors and those to come. Choose from hundreds of SBus connectivity and expansion options to custom configure the SPARCserver 1000E for any environment.	*Due to the expandability of the SPARCserver 1000E, we have a flexible ordering process to allow you to configure your server to your exact requirements. For complete product and pricing information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.*

SPARCcenter™ 2000E

- AN IDEAL PLATFORM FOR RIGHTSIZING FROM A MAINFRAME
- BUILT-IN RELIABILITY, AVAILABILITY, AND SERVICEABILITY FEATURES
- MODULAR EXPANDABILITY LETS YOU EASILY ADD PROCESSORS, STORAGE, MEMORY, AND I/O
- CONTINUE TO USE THE LEADING RELATIONAL DATABASE MANAGEMENT SYSTEMS, PROGRAMMING TOOLS, END-USER APPLICATIONS, AND NETWORKING PRODUCTS

THE RELIABLE, POWERFUL, SCALABLE, ENTERPRISE SERVER

Whether you need support for a division, your entire business, or anything in between, the SPARCcenter™ 2000E server is the right size for your client-server environment. Its expandability makes it a very cost-effective investment. From the base configuration, processing power can be increased by a factor of 10 and memory by a factor of 80. So you only pay for what you need, when you need it. In fact, this is an ideal platform for running mission-critical applications and rightsizing from a mainframe. And like a mainframe, the SPARCcenter 2000E features built-in reliability, availability, and serviceability. ECC memory is standard, and parity checking on all data paths ensures data integrity. Built-in redundancy in crucial systems like the backplane bus, processor, I/O, memory subsystems, cooling unit, and an optional second power supply delivers exceptional reliability and uptime. Automatic System Recovery and fault isolation maximize availability. And the system's modular design simplifies service by making components easily accessible.

Like all of Sun's servers, the SPARCcenter 2000E runs the Solaris™ operating environment. Every time you add a processor, you dramatically increase database, application, and network file service performance. And the multi-threading capabilities of Solaris can provide performance increases by distributing the application demands across the processors in the system.

FEATURES + BENEFITS

Superior networking
For easy integration into the most complex multivendor environment, the SPARCcenter 2000E supports every leading network protocol for host-based or client-server processing, and the Solaris operating environment delivers the highest networking performance in the industry.

Exceptional expandability
Plug-in SPARC™ modules let you easily add processing power as well as next-generation technology. You can expand up to ten individual SBus channels with 40 expansion slots.

Grow your I/O
The two high-performance system buses, each a 64-bit wide XDBus,™ provide enough bandwidth to support next-generation SPARC processors and peripherals, so your investment is protected for years to come.

Innovative storage
With the SPARCstorage™ Array subsystem, the SPARCcenter 2000E can support several terabytes of data. Its intelligent controller offloads the I/O processing burden from the server, enhancing performance while offering such features as RAID and hot sparing of disk drives.

Easy board configuration
System boards plug into any of the ten slots in the system cabinet, in any order. Keyed connectors and inject/eject latches guide system boards into place, simplifying installation. Diagnostic LEDs give information about the configuration of each system board.

Reliability, availability, and serviceability
Numerous RAS features are built-in to the SPARCcenter 2000E. A variety of software solutions further ensure high availability. And the Solaris environment provides a comprehensive set of system and network security features to safeguard your information.

DESCRIPTION

Entry systems include two 85-MHz SuperSPARC+ processors with 2-MB external cache each, 64-MB memory, 18-GB internal Differential Fast/Wide SCSI-2 disk, and unlimited user Solaris RTU server license

Due to the expandability of the SPARCcenter 2000E we have a flexible ordering process to allow you to configure your server to your exact requirements. For complete product and pricing information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

Upgrades

remanufactured systems and spares

INVESTMENT PROTECTION SOLUTIONS

Sun's investment protection solutions enable you to keep up with the latest technological advances with a minimum of cost and effort. So you can maintain your competitive edge and cost-effectively grow your system at the same time. Our upgrade program lets you trade in your earlier generation workstations, servers, and other products for the latest Sun™ technology and products. Sun also remanufactures systems to a like-new condition, providing a low-risk and cost-effective way to maintain a homogeneous computing environment and expand your network. We also offer top-quality, factory-tested replacement parts for all our products, even earlier generation systems and options.

UPGRADE SOLUTIONS PROTECT YOUR EQUIPMENT INVESTMENTS WITH COST-EFFECTIVE UPGRADES

Sun is fully committed to keeping your technology up-to-date, no matter what generation of Sun products you have. Each piece of equipment you trade in will bring you significant savings on new Sun machines. So you can easily save thousands of dollars on the very latest, most powerful gear. Our upgrade program is extremely flexible so you can get exactly the solution you need. For example:

IF YOU HAVE:	YOU CAN UPGRADE TO:
An early generation Sun system	A new full system
A more recent Sun system	A new chassis
An early CPU module on a SPARCstation™ 10 or 20	A more advanced CPU module
An early graphics product	Better graphics capabilities
Other vendor's workstation	A new Sun system

We also offer upgrades on monitors, mass storage, and SBus cards, so you can keep everything compatible. And every Sun upgrade comes with our industry-leading warranty.

You can place orders for upgrades the moment the new equipment is ready to ship. Keep in touch with your Sun sales representative or Sun authorized reseller to stay up-to-date on everything that's newly available.

- **A COST-EFFECTIVE WAY TO GET THE LATEST TECHNOLOGY**
- **TRADE IN ONLY THE PARTS THAT NEED TO BE UPGRADED**
- **UPGRADE AVAILABILITY IS SIMILAR TO NEW EQUIPMENT SHIPMENT**

DESCRIPTION
SPARCclassic™ X, SPARCstation 1/1+, SPARCstation IPC™, SPARCstation IPX™, SPARCstation 2, or SPARCclassic upgrade to SPARCstation 4. Includes: SPARCstation 4 chassis with 110-MHz microSPARC-II™ processor, 32-MB memory, 1-GB internal SCSI-2 disk
DESCRIPTION
SPARCstation SLC™ or SPARCstation ELC™ upgrade to SPARCstation 5. Includes: SPARCstation 5 chassis with 110-MHz microSPARC-II processor, 17-inch color monitor, TurboGX™ frame buffer, 32-MB memory, 1-GB internal SCSI-2 disk, 16-bit audio
DESCRIPTION
SPARCstation LX, SPARCstation IPX, or SPARCstation 2 upgrade to Sun Ultra 1 Model 140 with 143-MHz UltraSPARC-I processor. Includes: Sun Ultra Model 140 chassis, TurboGX graphics, 64-MB memory, 2.1-GB internal SCSI-2 disk
DESCRIPTION
SPARCstation 20 upgrade to Sun Ultra 1 Model 170E with 167-MHz UltraSPARC-I processor. Includes: Sun Ultra 1 Model 170E chassis, Creator graphics
DESCRIPTION
Upgrade from SPARCserver™ 630MP or SPARCserver 670MP to SPARCserver 1000E. Includes: SPARCserver 1000E system cabinet, SunCD 4, two 85-MHz SPARC modules, no memory
DESCRIPTION
Upgrade from SPARC™ system 690MP with DSCSI disks to SPARCcenter™ 2000E. Includes: SPARCcenter 2000E system cabinet, SunCD 4, two 85-MHz SPARC modules, SBus Fast SCSI-2/Buffered Ethernet card (FSBE/S), power supply and quad blower, no memory

This is a representative sample of available configurations. For a complete listing of available configurations and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

Remanufactured systems solutions

- A COST-EFFECTIVE WAY TO MAINTAIN A HOMOGENEOUS COMPUTING ENVIRONMENT AND EXPAND YOUR NETWORK
- SELECTED SYSTEMS ARE REMANUFACTURED BY SUN TO A LIKE-NEW CONDITION AND INCLUDE STANDARD FACTORY WARRANTY
- EACH SYSTEM INCLUDES A BRAND-NEW MONITOR, THE LATEST SUN OPERATING SYSTEM, AND A RIGHT-TO-USE LICENSE

SAVE THOUSANDS OF DOLLARS OFF ORIGINAL LIST PRICES

Sun's remanufactured systems provide a flexible, economical way to add systems, expand the number of seats in your network, and maintain a homogeneous environment. Our rigorous remanufacturing process ensures that any Sun remanufactured system you buy is functionally equivalent to a new system of the same type. And all remanufactured systems include a brand new monitor for years of trouble-free use. Selected remanufactured systems come with the same warranty that accompanied them when they were new. We also include an official Solaris™ right-to-use license with every remanufactured SPARC™ system. Available platforms include:

WORKSTATIONS AND SERVERS

- SPARCclassic™
- SPARCstation IPX™
- SPARCstation 2
- SPARCstation LX
- SPARCstation 10

DESKSIDE AND DATACENTER SERVERS

- SPARCserver™ 600MP series
- SPARCserver 1000 series
- SPARCserver 2000 series

EXPANSION OPTIONS

- Memory
- Expansion disks

Other systems are also available on an occasional basis, and some of those listed above are available in small quantities, so contact your Sun sales representative or Sun authorized reseller for the latest listing.

Spares solutions

- BOTH NEW AND REMANUFACTURED FACTORY-TESTED SPARES AVAILABLE
- MORE THAN 1000 SPARE PARTS AVAILABLE FOR EVERY SYSTEM, FROM THE SPARCstation™ 1 TO Sun Ultra SYSTEMS
- EXPEDITED DELIVERY THROUGH AUTHORIZED SUN RESELLERS

TOP-QUALITY HARDWARE SPARES AT HARD-TO-BEAT PRICES

If you're maintaining your own equipment, Sun can provide you with top-quality hardware spares at affordable prices. We provide factory-tested replacement parts for all our products, from SPARCserver™ systems to add-on system options. All spares incorporate the latest component revisions and include a one-year warranty. Sun offers spare parts for all your system-support needs, including:

NEW SPARES FOR CURRENT-GENERATION SYSTEMS

- System boards
- Disk drives
- Monitors
- Most other major replaceable components for current-generation systems

REMANUFACTURED SPARES FOR EARLIER-GENERATION SYSTEMS

- System boards
- Disk drives
- Monitors
- Most other major replaceable components for earlier-generation systems

SPARCstorage™ Array 112

- FULL-FEATURED STACKABLE STORAGE THAT GROWS WITH YOUR NEEDS
- HANDLES FROM HUNDREDS OF GIGABYTES TO TERABYTES OF DATA
- PROVIDES RAID LEVELS 5, 1, 0+1, AND MORE TO MEET YOUR AVAILABILITY REQUIREMENTS
- INNOVATIVE SINGLE-CONNECTOR PLUGGABLE DRIVES
- COMPLETELY CUSTOMER SERVICEABLE, WITH NO TOOLS REQUIRED
- NEW MODEL 112 CONTROLLER DELIVERS 20 TO 25% MORE PERFORMANCE THAN PREVIOUS MODELS

COMPACT, RELIABLE STORAGE THAT GROWS WITH YOUR NEEDS

The SPARCstorage™ Array 112 integrates industry-leading performance features—RAID, hot sparing, a high-speed fibre channel, and a dual-ported controller for system failover to name just a few—in a compact package that grows with your needs. The stackable and rack-mountable SPARCstorage Array 112 supports up to 30 high-performance 20-MB/sec SCSI-2 disk drives in a single tabletop package. For even greater capacity, connect two arrays to each SBus slot on the host system for connectivity to hundreds of gigabytes of data. The subsystem's intelligent controller, with non-volatile cache, offloads I/O processing from the server, improving performance on the host system. The leading-edge fibre channel interface provides more bandwidth than other disk arrays. It also allows you to use fiber-optic cables as long as two kilometers, so the host system and the disk array can reside in different buildings, further safeguarding your data. It provides RAID levels 5, 1, and 0+1, and offers the additional flexibility of supporting RAID and independent disks simultaneously. So, you can choose the ideal configuration to match your requirements for availability, performance, capacity, and price.

FEATURES + BENEFITS

Add capacity as needed
Our innovative single-connector disk drives don't use cables, so you can plug as many as ten drives into each drawer—up to 30 in a single SPARCstorage Array 112. When you need more capacity, an SBus card connects two subsystems to an SBus slot on the server.

On-line administration
The advanced SPARCstorage Volume Manager software lets you handle almost all administrative tasks on line—monitor component status, tune performance, even reconfigure the system using simple point-and-click, drag-and-drop commands—while users continue to access information and run their applications.

Intelligent controller
The intelligent controller features a microSPARC™-II CPU, plus Sun's dual-ported fibre channel chip, six Fast/Wide SCSI channels, and non-volatile cache for added speed and reliability.

Hot spare option
Choose the most convenient time to replace a faulty disk. With this option, a hot spare goes to work automatically, rebuilding your data and restoring the system to full speed. Replacing a disk takes less than a minute—no tools required. With our warm-plug features, you don't even have to shut off the power.

For ordering information and a complete listing of available options and accessories, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

DESCRIPTION
12.6-GB (6 x 7200 RPM 2.1-GB Fast/Wide SCSI-2 SC disks) SPARCstorage Array 112
DESCRIPTION
37.8-GB (18 x 7200 RPM 2.1-GB Fast/Wide SCSI-2 SC disks) SPARCstorage Array 112
DESCRIPTION
63-GB (30 x 7200 RPM 2.1-GB Fast/Wide SCSI-2 SC disks) SPARCstorage Array 112

New

SPARCstorage™ Array 210 RSM

- TERABYTES OF STORAGE CAPACITY FOR DATA CENTER APPLICATIONS
- HIGH-SPEED FIBRE CHANNEL INTERFACE PROVIDES MORE BANDWIDTH THAN OTHER DISK ARRAYS
- RAID LEVELS TO MEET YOUR HIGHEST AVAILABILITY REQUIREMENTS
- HOT-PLUGGABLE REDUNDANT POWER AND COOLING DISKS
- INDUSTRY-LEADING PRICE PER MEGABYTE
- PROTECTS INVESTMENTS IN DIFFERENTIAL SCSI DRIVES AND PACKAGING
- NEW MODEL 210 DELIVERS 20 TO 25% MORE PERFORMANCE THAN THE PREVIOUS MODEL

MISSION-CRITICAL STORAGE AT AN AFFORDABLE PRICE

The SPARCstorage™ Array 210 RSM offers reliability and performance for enterprises that require terabytes of capacity. Combined with Sun's SPARCcenter™ 2000E server, the rack-mounted SPARCstorage Array 210 RSM delivers the scalability needed for large mission-critical data center applications at an exceptionally low price per gigabyte. With the Model 210 RSM, you can connect up to 42 hot-pluggable, 3.5-inch drives in a single cabinet. It provides RAID levels 5, 1, and 0+1, and offers the additional flexibility of supporting RAID and independent disks simultaneously. With so many features—from RAID to hot spares to on-line administration—the SPARCstorage Array 210 RSM provides an unparalleled combination of capacity, performance, high availability, and manageability at a surprisingly low price.

FEATURES + BENEFITS

Cost-effective modular growth
The modular design lets you easily and cost-effectively add storage capacity—more than 300 gigabytes in just one cabinet. A single fiber-optic cable connects the cabinet to the host system.

Increased performance
The intelligent controller, with non-volatile cache, offloads the I/O processing burden from the server so performance increases as you add more arrays.

On-line administration
The advanced SPARCstorage Volume Manager software provides graphical tools for on-line performance monitoring and reconfiguration, so you can identify and correct bottlenecks while applications keep running.

Investment protection
If you've already invested in Sun 5.25-inch differential SCSI drives, you don't have to buy new drives to migrate to the benefits of the SPARCstorage Array 210 RSM. Sun 2.1-GB, 2.9-GB, and 9-GB drives can be connected to the Model 210 RSM controller.

DESCRIPTION
SPARCstorage Array 210 RSM™ with controller assembly

DESCRIPTION
SPARCstorage Array 210 RSM with 3x4.26-GB drives

DESCRIPTION
SPARCstorage Array 210 RSM with 7x4.26-GB drives

For ordering information and a complete listing of available options and accessories, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

SPARCstorage™ UniPack

- HIGHER CAPACITY AND PERFORMANCE FOR EXTERNAL STORAGE AND BACKUP DEVICES
- IDEAL FOR SUN'S WORKSTATIONS AND DESKTOP SERVERS
- EASILY CONNECTED TO A WORKSTATION THROUGH THE BUILT-IN SCSI HOST ADAPTER PORT OR THROUGH A SCSI-2/SBUS HOST ADAPTER

AVAILABLE IN FAST/WIDE DISK DRIVES AND REMOVABLE DEVICES

The SPARCstorage™ UniPack offers external storage and backup devices for Sun's workstations, desktop servers, and power users. NFS,™ database, and Internet applications are available for servers; EDI and multimedia applications for power users are easily configured with the SPARCstorage UniPack products.

FEATURES + BENEFITS	DESCRIPTION
Fast/Wide SCSI capable drives Provides 20-MB/sec transfer rates, twice that of the current enclosure, making it ideal for transferring large sequential files.	1.05-GB 5400-RPM disk drive
Higher capacity The UniPack provides up to 4.2-GB of external drive capacity for database and multimedia applications. Up to 14-GB of data backup are available with the 8mm tape drive.	2.1-GB 7200-RPM disk drive
Easy installation and greater data reliability Single connector attachment (SCA) makes it easy for users to remove or install disk drives. The SCA connection adds to the reliability of the system by using fewer cables. Auto SCSI termination helps prevent future SCSI problems.	4.2-GB 5400-RPM disk drive
Quad-speed SunCD™ 4 This is a quadruple-speed CD-ROM drive with an average transfer rate of 600-KB/sec, twice as fast as the current SunCD 2Plus CD-ROM drive. The SunCD 4 supports many multimedia formats such as CD-ROM, CD-Audio, and multi-session PhotoCD.	5-GB 4mm tape drive
	14-GB 8mm tape drive
	QIC 2.5-GB tape drive
	SunCD 4 CD-ROM drive

For ordering information, system compatibility, and a complete listing of mass storage options and accessories, contact your local Sun Microsystems sales office or authorized Sun Reseller.

New

SPARCstorage™ MultiPack

- HIGH-PERFORMANCE BURST AND DATA TRANSFER RATES
- HOT-PLUG DISKS IMPROVE RELIABILITY AND EASE OF USE
- EASY TO OPEN AND SERVICE
- LOCKABLE PACKAGING PROTECTS YOUR DATA

THE IDEAL EXTERNAL DRIVE ENCLOSURE

The SPARCstorage™ MultiPack desktop subsystem is a multiple, hot-plug ready, external drive enclosure for Sun's desktop workstations and servers. Whether you choose the MultiPack-12, with 2x, 6x, and 12x 2.1-GB 7200 rpm, or the MultiPack-6, with 2x, 4x, and 6x 4.2-GB 5400 rpm, the SPARCstorage MultiPack complements Sun's mass storage product line and brings new features to the desktop. For example: a maximum of 25.2-GB capacity, multiple Fast/Wide capable SCA-2 drives, hot-swappable disk drives, the lowest cost/MB option, excellent dollar/IOPS option, geographical addressing, automatic SCSI termination, easy-to-open and lockable packaging, and single Connector Attach (SCA-2) disks. It's easy to see why the SPARCstorage MultiPack complements the SPARCstorage UniPack as well as future desktop workstations and servers.

FEATURES + BENEFITS	DESCRIPTION
Multiple drive enclosure The MultiPack-12 provides the highest $/IOPS. Twelve active spindles per SCSI bus, overlapped seeks, and optimum SCSI bus bandwidth mean the highest performance possible. The MultiPack-6 boasts large capacity drives that provide the lowest $/MB.	4.2-GB (2x, 4x, 6x, 12x 2.1-GB), 7200 RPM SCSI-2 MultiPack
Geographical SCSI addressing Simplifies SCSI ID selection, minimizes the risk of breaking internal cables, and improves system reliability. The MultiPack-12 has preset SCSI IDs, and the MultiPack-6 SCSI ID can be set to 1-6 or 9-14 SCSI IDs for more flexible configurations.	8.4-GB (2x, 4x, 6x 4.2-GB), 7200 RPM SCSI-2 MultiPack
Automatic SCSI Termination Eliminates the need for external terminators. Circuitry in the enclosure automatically terminates a SCSI bus if the MultiPack is the last device on the bus.	2.1-GB 7200 RPM Fast SCSI-2 Internal SC Drive
	4.2-GB 5400 RPM Fast SCSI-2 Internal SC Drive

For ordering information, system compatibility, and a complete listing of mass storage options and accessories, contact your local Sun Microsystems sales office or authorized Sun Reseller.

New

SPARCstorage™ DLT™4000
tape drive

- USES DIGITAL LINEAR TAPE (DLT), AN INDUSTRIAL-STRENGTH TECHNOLOGY THAT PROVIDES HIGH CAPACITY, HIGH PERFORMANCE, AND HIGH RELIABILITY
- HIGH TRANSFER RATE ALLOWS 40-GB BACKUP IN ONLY A FEW HOURS
- SUPPORTED BY STANDARD UNIX® COMMANDS AND SOLSTICE™ BACKUP

PROVIDING MORE CAPACITY PER TAPE

With 20-GB native (40-GB compressed) capacity and 1.5-MB/sec (3.0-MB/sec compressed) transfer rate, the SPARCstorage™ DLT™4000 tape drive can achieve a 40-GB backup on a single tape in about four hours. Available in either an external desktop or internal option, the SPARCstorage DLT4000 uses DLT™ (Digital Linear Tape), providing leading capacity and performance for storage management applications. In addition, the SPARCstorage DLT4000 boasts exceptional reliability.

New

SPARCstorage™ DLT™4700
tape autoloader

- UP TO 280-GB CAPACITY MAKES IT THE IDEAL SOLUTION FOR LARGE UNATTENDED BACKUP
- HIGH TRANSFER RATE ALLOWS BACKUPS OF UP TO 130-GB IN A 12-HOUR SHIFT, ALLOWING SPEEDIER AND LARGER BACK-UPS—INCLUDING "NEAR ON-LINE" STORAGE OF DATA IN HSM APPLICATIONS
- IDEAL FOR BACKUP/ARCHIVAL/HSM OF WORKGROUP SERVERS TO ENTERPRISE DATACENTERS, WITH CAPACITIES UP TO 1-TB (USING MULTIPLE AUTOLOADERS)

PROVIDES UNATTENDED BACKUP OF UP TO 280-GB OF DATA

With its seven-tape magazine, the SPARCstorage™ DLT™4700 autoloader can hold 140-GB (280-GB compressed) of data for easy automated backup. The SPARCstorage DLT4700 comes ready to be plugged onto most Sun systems and host adapters. The SPARCstorage DLT4700 is ideal for backup, archival, and Hierarchical Storage Management (HSM) of large workgroup servers and enterprise datacenters.

FEATURES & BENEFITS	DESCRIPTION
More capacity per tape Allows more data storage on each tape, reducing the number of tapes and facilitating data retrieval. Ideal for automated unattended backup with autoloader mechanism.	SPARCstorage DLT4000 tape drive in external desktop enclosure (50-pin to 50-pin SCSI cable - X6051A) (50-pin to 68-pin SCSI cable - X6052A)
Better overall performance High transfer rate, cache buffering increases overall performance of the drive, with fast repositioning and file location for decreased waiting time and increased productivity.	SPARCstorage DLT4000 internal tape drive for expansion rack (6053A); SPARCstorage DLT4000 internal tape drive with multi-tape backup tray for the expansion rack (6054A)
Exceptional reliability 80,000 hours MTBF, 400,000 MCBF (autoloader), 500,000 passes on DLT media, and 10,000 hours head life ensure data integrity at all times.	
Compatibility The SPARCstorage DLT products attach to most Sun workstations, servers, and SCSI host adapters.	
Digital Linear Tape technology Provides leading capacity, performance, and reliability for storage management applications.	SPARCstorage DLT4700 tape autoloader in external desktop enclosure (50-pin to 50-pin and 50-pin to 68-pin SCSI cable)

This is a representative sample of available configurations. For a complete listing of available configurations and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

SPARCstorage™ Library 8/140

- AUTOMATED STORAGE FOR ENTERPRISE AND DEPARTMENTAL BACKUP AND ARCHIVING
- IDEAL FOR NETWORKS AND SERVERS WITH 50- TO 500-GB CAPACITY
- CHOOSE FROM THREE CONFIGURATIONS WITH OPTIONAL SECOND DRIVE AND BAR-CODE READER, OR THREE FULL CONFIGURATIONS

HIGH-CAPACITY UNATTENDED BACKUP

The SPARCstorage™ Library Model 8/140 is a cost-effective enterprise or departmental data management solution. It is an automated storage device that holds a ten-tape magazine and up to two 8mm tape drives. A robotic handling mechanism with an optional bar-code reader transfers the tape from the magazine to the drive(s). The SPARCstorage Library is ideally suited for unattended backup of large networks and server systems, with capacities from 50 to 500 gigabytes. It also offers economical on-line and off-line storage for archival and hierarchical storage management (HSM). The SPARCstorage Library comes in three different configurations: a "tower" or deskside version, a stackable unit, and a rack-mounted version for the SPARCserver™ 1000E and SPARCcenter™ 2000E systems.

FEATURES + BENEFITS

High-capacity, high-performance
The SPARCstorage Library can store an average of 140-GB of data (70-GB native) on only ten tapes. The native transfer rate of the 8mm tape drive is three times faster than standard DDS-1 4mm drives. With two drives, concurrent backups can be performed at 2-MB per second. At that rate, 50-GB can be backed up in less than seven hours.

Applications support
The SPARCstorage Library supports sophisticated data management solutions. With Solstice™ Backup™ software, heterogeneous networks can be backed up in unattended mode, with minimal action required from the system administrator.

Flexible, upgradable, and versatile
The SPARCstorage Library comes with one 8mm tape drive (second drive and bar-code reader optional) or in a full configuration with two 8mm tape drives and bar-code reader in a tower stackable unit or rack-mount design to meet your enterprise or departmental requirements. It will support future 8mm technology for easy upgradability and investment protection.

DESCRIPTION
140-GB SPARCstorage Library Model 8/140, Tower
DESCRIPTION
140-GB SPARCstorage Library Model 8/140, Rack
DESCRIPTION
140-GB SPARCstorage Library Model 8/140, Stack
DESCRIPTION
140-GB SPARCstorage Library Full Model 8/140, Tower
DESCRIPTION
140-GB SPARCstorage Library Full Model 8/140, Rack
DESCRIPTION
140-GB SPARCstorage Library Full Model 8/140, Stack

For ordering information and system compatibility, contact your local Sun Microsystems sales office or authorized Sun Reseller.

Memory products

COMPATIBLE WITH SUN™ PRODUCTS, CERTIFIED BY SUN

Why buy memory that is certified to be 100 percent compatible with Sun™ products? It's simple. Memory that saves money up front can really cost you lots more in random errors—even system crashes—if it hasn't been subject to the most rigorous standards and controls. Only Sun memory products meet Sun's stringent system, DIMM, and DRAM requirements for soft error rate, design, speed, test, IC fabrication process, manufacturing, quality, and price. No other supplier can back up a claim of 100 percent Sun compatibility.

Sun's memory products support our full line of servers and workstations, providing improved windowing, multimedia, and database performance.

- **ONLY SUN MEMORY PRODUCTS MEET SUN'S STRINGENT SYSTEM, DIMM, AND DRAM REQUIREMENTS FOR QUALITY AND RELIABILITY**
- **FIVE-YEAR WARRANTY**
- **COMPETITIVE PRICING**
- **PATENTED HIGH-DENSITY SUN DIMM DESIGNS**

FEATURES + BENEFITS

Rigorous testing
We perform rigorous qualification tests so inferior memory products don't end up in your system.

Easy upgrades
Our memory products come with clear documentation and all the necessary tools to make installation simple.

Excellent value
Only Sun memory products meet our stringent quality requirements, yet are competitively priced.

For a complete listing of memory options, pricing, and ordering information, contact your local Sun Microsystems sales office or authorized Sun Reseller.

ShowMe™
Video conferencing

COLLABORATIVE COMPUTING TOOLS FOR YOUR DESKTOP

The ShowMe™ family of products offers the most complete and intuitive desktop video conferencing solution for workstations.

ShowMe™ 2.0

ShowMe 2.0 Audio/Video brings face-to-face meetings to your desktop through network-based video conferencing. Without using your phone, you can enhance long-distance meetings with participants' gestures and visual cues, show them your latest product prototypes, even switch to videotaped input—at your desk. Includes ShowMe™ SharedApp™ and ShowMe™ Whiteboard.™

ShowMe SharedApp™ 2.0

Enabling geographically dispersed users to share their applications, ShowMe SharedApp provides a common, identical view of an application so users can collaboratively interact with it. Once an application is shared, all participants have full, simultaneous access to the application's capabilities, such as viewing and controlling the application and its data.

ShowMe Whiteboard™ 2.0

ShowMe Whiteboard 2.0 allows participants to use an on-screen whiteboard just as they would a conference room board: to draw diagrams or record notes, issues, and action items. They can input anything on their monitor to the whiteboard for everyone's feedback, and since each participant has a color-coded on-screen marker, it's easy to visually express their ideas.

- **INCLUDES EVERYTHING YOU NEED FOR PRODUCTIVE DESKTOP VIDEO CONFERENCING**
- **ShowMe LETS USERS SEE AND HEAR GEOGRAPHICALLY DISTANT ASSOCIATES, GIVE LIVE DEMONSTRATIONS, AND CONTRIBUTE VIDEOTAPED MATERIALS RIGHT FROM THEIR DESKTOPS**
- **ShowMe SharedApp LETS DISPERSED USERS SIMULTANEOUSLY VIEW AND INTERACT WITH THEIR FAVORITE APPLICATIONS AS IF THEY WERE ALL STANDING AROUND A SINGLE WORKSTATION**
- **ShowMe Whiteboard LETS DISTANT USERS VISUALLY EXPRESS IDEAS, DRAW DIAGRAMS, RECORD ISSUES AND ACTION ITEMS, AND DISPLAY MATERIALS FOR DISCUSSION**

FEATURES & BENEFITS

Improves enterprise-wide communications
The ShowMe family of products enables more immediate, frequent, and effective communications among geographically dispersed colleagues and project teams. As a result, organizations get their products and services to market faster, with higher quality results, and at a lower cost.

Variety of configurations
ShowMe 2.0 is available as a complete solution (including software, SunVideo™ card and NTSC video camera). In addition, ShowMe Whiteboard and ShowMe SharedApp may be purchased separately.

DESCRIPTION
ShowMe 2.0, media, documentation, and single-user license
DESCRIPTION
ShowMe SharedApp 2.0, media, documentation, and single-user license
DESCRIPTION
ShowMe Whiteboard 2.0, media, documentation, and single-user license

This is a representative sample of available products. For a complete listing of Multi User Packs and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

ShowMe

ShowMe™ TV™

- LETS USERS SIMULTANEOUSLY HEAR AND VIEW UP-TO-THE-MINUTE NEWS, SPECIAL REPORTS, OR INTERNAL COMMUNICATIONS FROM A VARIETY OF SOURCES
- CAPTURES IMAGES FOR INCLUSION IN E-MAIL OR REPORTS
- CONTROLS NETWORK BANDWIDTH AND BROADCAST RANGE

ShowMe™ TV™ 1.1 AND ShowMe™ Transmitter™ 1.1

ShowMe TV is a powerful audio/video communications product that lets you constantly monitor and disseminate information throughout your organization. ShowMe TV 1.1 is a software product that allows a Sun workstation user to view audio/video media in a resizable window. The media can come from a local/remote hard disk, CD-ROM, Sun MediaCenter Server, or ShowMe™ Transmitter™. ShowMe TV 1.1 supports MPEG, RLE, JPEG, or CellB compression formats, and can be use to control MPEG1 streams from the Sun MediaCenter server.

ShowMe Transmitter 1.1 broadcasts video and audio from a standard video source such as a tuner or camera connected to a SunVideo Board, or an audio/video file to any Sun workstation on the network. Network bandwidth use is controlled by efficient compression and by user control and scheduling options. ShowMe Transmitter 1.1 includes a single-user copy of ShowMe TV 1.1.

FEATURES + BENEFITS	DESCRIPTION
Picture-in-Picture display Stay informed on up-to-the-minute news and information by viewing multiple channels concurrently with Picture-in-Picture or multiwindow display.	ShowMe Transmitter 1.1, media, documentation, and single-user license
Record and edit Record single frame, short segments, or an entire broadcast for later editing or review.	DESCRIPTION
Open or closed broadcast option Broadcast confidential information only to specific groups or individuals within the organization.	ShowMe TV 1.1, media, documentation, and single-user license
Powerful network management Choose broadcast or secure narrowcasting and control bandwidth, users, and usage as appropriate for the needs of your site.	*For ordering information and a complete listing of available options and accessories, please contact your local Sun Microsystems sales office or authorized Sun Reseller.*

- CAPTURES, DIGITIZES, AND COMPRESSES NTSC OR PAL VIDEO SIGNALS
- ENABLES MULTIMEDIA APPLICATIONS, INCLUDING VIDEO CONFERENCING, VIDEO MAIL, AND TRAINING PRESENTATIONS

SunVideo™ SBus CARD

The SunVideo™ SBus card is a real-time video capture and compression subsystem for SPARCstation™ systems that enables a variety of multimedia applications. The single-wide SBus card captures, digitizes, and compresses NTSC or PAL video signals from video cameras, VCRs, videodisk players, and other sources. The compressed digital video can be transmitted over networks, stored on disk, or displayed in a window on the workstation screen.

SunCamera™

The SunCamera™ is a color CCD monitor-top video camera designed for use with video conferencing software or other applications where low ambient light levels are present and automatic focus characteristics are critical. Utilizing industry-standard electronics, the camera provides NTSC video signals suitable for use with the SunVideo, VideoPix,™ or similar video cards. Equipped with a convenient privacy shutter, it lets you know when the camera can see you.

Multimedia Kit

Includes SunVideo card, SunCamera, and documentation.

FEATURES + BENEFITS	DESCRIPTION
Automatic configuration using industry standards The SunVideo card senses whether the source is NTSC or PAL and configures itself appropriately. The video is sampled as square pixels using industry-standard video capture. A revolutionary video RISC processor performs compression in multiple standard formats: JPEG, MPEG-1, and CellB. Microcode is downloaded to the board by the host.	SunVideo real-time video board and documentation
Software Interface SunVideo is supported by the XIL™ foundation library software bundled with the Solaris™ 2.3 (or later) environment. Video can be captured and compressed with the SunVideo card, then decompressed and displayed even on SPARCstation systems not equipped with a SunVideo card.	DESCRIPTION
Enables multimedia applications The SunVideo card enables a wide variety of application areas, including collaborative computing such as desktop video conferencing or corporate broadcasting; distance learning; interactive services such as video-on-demand or video library services; surveillance; authoring systems; and video editing.	Color video camera
	DESCRIPTION
	MultiMedia kit, SunVideo, camera, and documentation
	For ordering information and a complete listing of available options and accessories, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

Sun ZX

INDUSTRY-LEADING PERFORMANCE IN ENTRY-LEVEL AND MULTIPROCESSING 3-D DESKTOPS

For sophisticated, high-performance 3-D graphics, no other competitive system comes close to the SPARCstation 5ZX, with more than 350,000 shaded triangles per second. The SPARCstation 5ZX makes advanced 3-D graphics finally affordable. Sophisticated features such as antialiasing, subpixel addressing, transparency, and NURBS support in hardware are all standard.

When you need even more floating point power, multiprocessing, and larger disk and memory capacity, try the SPARCstation 20ZX. Both systems include fast 24-bit Gouraud shaded, Z-buffered lighted polygons for solids modeling applications. Also standard are true-color display capabilities and stereo support.

Sun TurboGX™ and TurboGXplus™

AFFORDABLE 8-BIT ACCELERATED GRAPHICS

The TurboGX and TurboGXplus graphics SBus cards accelerate 8-bit 2-D/3-D vector rendering and windows performance.

The TurboGX provides 780,000 2-D and 445,000 3-D vectors per second for the SPARCstation 5 and SPARCstation 20 systems, and 740,000 2-D and 380,000 3-D vectors per second for the Ultra 1 systems.

The TurboGXplus provides 1.7 million 2-D and 560,000 3-D vectors per second for the SPARCstation 5 and SPARCstation 20 systems, and 1.2 million 2-D and 468,000 3-D vectors per second for the Ultra 1 systems.

GRAPHICS, IMAGING, AND DIGITAL MEDIA—YOU'VE GOT TO SEE IT LIVE

Today's desktop computing environment is becoming the focus of converging technologies supporting windowing systems, video imaging, CAD, multimedia, and other rendering-intensive applications. Sun's graphics systems provide a wide array of solutions with industry-leading graphics, imaging, and digital media capabilities and performance to meet any of your visual computing needs.

Sun SX

INTEGRATED VISUAL COMPUTING

The SPARCstation 20SX brings you 24-bit true-color graphics, providing fast desktop image processing combined with entry-level 3-D graphics capabilities.

Freedom Series™

SOPHISTICATED HIGH-END 3-D GRAPHICS

The SPARCstation 20 with the Freedom Series offers high-speed hardware texture and MIP mapping, Gouraud shading, Phong shading, dynamic pixel allocation, and stereo support. You also enjoy up to 3 million anti-aliased vectors per second.

Sun Creator™ and Creator3D™

Creator—STATE-OF-THE-ART 24-BIT ACCELERATED GRAPHICS

The Sun Ultra 1 Creator and Sun Ultra 2 Creator graphics provide 24-bit color and high-performance graphics acceleration for windowing, 2-D and 3-D graphics, and imaging.

Sophisticated 3D-RAM graphics memory provides high-bandwidth and built-in acceleration for 3-D graphics and video. A full-color single buffered stereo display comes standard.

Creator3D—STATE-OF-THE-ART 24-BIT 3-D ACCELERATED GRAPHICS

Our state-of-the-art Sun Creator3D graphics offers high-performance, accelerated double-buffered, 28-bit Z-buffered 24-bit color. Acceleration for windowing, 2-D and 3-D graphics, solids, and imaging is integrated into the same frame buffer, while stereo display support comes standard. Sophisticated 3D-RAM graphics memory enables high-bandwidth and built-in acceleration for 3-D graphics and video.

For sample configurations, see pages 4, 5, 6, and 7.

Solaris™
operating environment

- THE INDUSTRY-LEADING DISTRIBUTED COMPUTING ENVIRONMENT
- ONC+™ ENVIRONMENT PROVIDES SEAMLESS ENTERPRISE-WIDE NETWORKING
- FULL, INTEGRATED SYMMETRIC MULTIPROCESSING (SMP) AND MULTITHREADING SUPPORT MAXIMIZES SYSTEM, SOLARIS, AND APPLICATION PERFORMANCE
- FULL COMPLIANCE WITH INDUSTRY STANDARDS PROTECTS YOUR INVESTMENTS
- CHOICE OF OpenWindows™ OR COMMON DESKTOP ENVIRONMENT (CDE) GRAPHICAL USER INTERFACE INCLUDES THE X11R5 WINDOW SERVER WITH ADOBE® LEVEL II DISPLAY PostScript,™ SUITE OF PRODUCTIVITY APPLICATIONS, AND ToolTalk™ INTER-APPLICATION COMMUNICATION SYSTEM
- INTEGRATED, ADVANCED FEATURES INCREASE THE PRODUCTIVITY OF DEVELOPERS, END USERS, AND SYSTEM ADMINISTRATORS

INDUSTRY-LEADING DISTRIBUTED COMPUTING ENVIRONMENT

The Solaris™ operating environment integrates multiprocessing, multithreading, multimedia object, and high-performance networking technologies. The combination enables your company to develop, deploy, and manage business solutions that deliver global access to resources.

Solaris provides network services through Sun's open ONC+™ environment, and offers interoperability with other network services based on DCE, NetWare, and OSI. This gives enterprise computing users access to resources across multiple network environments, transparent application access to underlying network services, and the ability to easily add new network services and technology.

With Solaris security tools, you can implement low, medium, or high security levels to protect against unauthorized access. The multitasking, symmetric multiprocessing, and multithreading capabilities of Solaris exploit the compute power of both the SPARC™ and x86-based systems, delivering high-performance across a wide range of applications. A run-time environment makes it easy to develop and deploy applications efficiently. Compliance with industry standards and strict adherence to documented programming interfaces free developers to create new products and services while easing the development and deployment of new applications.

The Solaris desktop environment includes an X11R5 window server enhanced with Adobe® Level II Display PostScript,™ a powerful combination of display and printing capability. The Solaris ToolTalk™ messaging system and a suite of productivity tools are also integral parts of the Solaris environment.

Solaris includes many tools and services that enable easy development, deployment, and administration of the wide range of applications necessary to run today's global businesses. It also provides a foundation and framework for many-layered products that extend the environment, so you can tailor solutions to meet your own business requirements.

Solaris installation is customizable for a wide range of users over the network or from CD, and for basic system, network, and peripheral administration services.

FEATURES + BENEFITS	DESCRIPTION
High productivity for all users Developers create new products easily with Solaris ToolTalk messaging service, rapid prototyping tools, and multithreading compilers. End users benefit from easy-to-use and intuitive graphical tools, a wide choice of applications, and high-performance through multiprocessing. And system administrators enjoy automated installations, C2 security, on-line backup, high availability, and much more.	Solaris™ 2.x media for new systems only, all desktop SPARC™ systems
High-performance across applications Solaris adds advanced features to extend multitasking and multiuser capabilities across a wider range of applications. These features include symmetric multiprocessing, multithreading, real-time response, and cache file system.	Solaris 2.x media for new systems only, all SPARC servers
Easy configuration Automated software installation, run-time kernel configuration, and worldwide language support ease the task of software and hardware configuration.	Solaris 2.x system administrator on-line documentation includes, media, single-user license, and documentation for all SPARC systems
Industry standards protect investments Full compliance with industry standards, including SVR4, POSIX, X/OPEN, FIPS, X11, ANSI C, and COSE, ensures interoperability with other computing environments and protects your current and future investments.	Solaris 2.x hardcopy documentation
The applications you need More than 10,000 Solaris applications, plus the ability to run Windows, DOS, and Macintosh applications with available software.	Solaris 2.4x86 Desktop includes, media, single-user license, and documentation

For a complete listing of Solaris products, including Multi User Packs and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

- A FULLY BINARY-COMPATIBLE AND INTEGRATED EXTENSION—ALL EXISTING SOLARIS 2.X APPLICATIONS RUN UNCHANGED AND UNAFFECTED ON SOLARIS NEO

SOLARIS NEO™

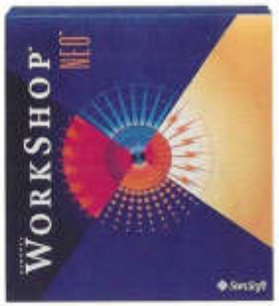
THE NETWORKED OBJECT EXTENSION TO THE SOLARIS OPERATING ENVIRONMENT

Solaris NEO gives companies a competitive advantage by allowing them to respond quickly to change. Solaris NEO does this by making networked enterprise computing more flexible, adaptive to business needs, and cost-effective.

Solaris NEO is a compatible extension to the Solaris product family. It is a complete solution that includes an operating environment, a desktop, and administration tools. Solaris NEO is OMG CORBA and OpenStep compliant.

FEATURES + BENEFITS	DESCRIPTION
Fully compatible Solaris extension Solaris NEO is not a "forced migration" to a different operating environment. Solaris NEO applications run side-by-side with Solaris 2.4 and 2.5 applications.	Solaris NEO Desktop Extension includes media, documentation, and license
OMG CORBA-compliant Enhances networked object application portability and interoperability among CORBA implementations from different vendors that support OMG standards.	Solaris NEO Server Extension includes media, documentation, and license
Bundled administration tools Solaris NEO is the only OMG-compliant networked object system that provides comprehensive system management utilities.	
Supports enterprise-wide client-server applications Unlike other CORBA-compliant systems, Solaris NEO's shared services support hundreds of application objects being concurrently accessed by thousands of users.	

This is a representative sample of available products. For a complete listing including Multi User Packs and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.



- POWERFUL TOOLS AND FRAMEWORKS FOR BUILDING CORBA-COMPLIANT ENTERPRISE APPLICATIONS

WORKSHOP NEO™

PRODUCT SUITE FOR NETWORKED OBJECT APPLICATION DEVELOPMENT

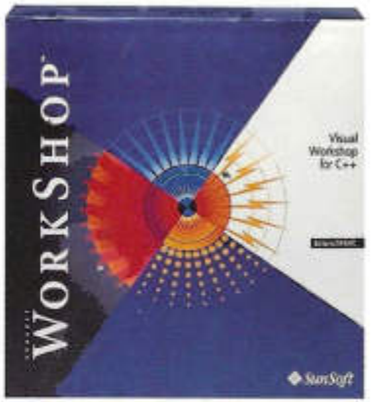
WorkShop NEO is an integrated suite of development tools for developing flexible, reusable, three-tier client-server applications. These tools help software developers build networked objects, and easily assemble applications from prebuilt objects.

WorkShop NEO includes SPARCworks™ developer productivity tools, SPARCompiler™ C++/C, SPARCworks/iMPact, SPARCworks/TeamWare, and NEOworks™ (SPARCworks distributed debugger, OMG IDL compiler, and NEOshare Development Framework).

FEATURES + BENEFITS	DESCRIPTION
Create OMG CORBA-compliant objects Enhances networked object application portability and interoperability among CORBA implementations from different vendors that support OMG standards.	WorkShop NEO 1.0 includes media and license
Supports the development of networked object applications WorkShop NEO is a complete development environment for programming an object network.	WorkShop NEO 1.0 includes media, documentation, and license
Support for distributed application development NEOshare Development Framework makes networked object development easier by freeing the developer from writing to low-level network system calls.	WorkShop NEO 1.0 includes media, documentation, and 10-user license
Easy development of networked applications Networked Object Constructor (NOC) simplifies the development of objects, networked applications, and shared services by minimizing low-level networking code creation.	WorkShop NEO 1.0 includes documentation

This is a representative sample of available products. For a complete listing including Multi User Packs and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

Developer products



- EASE OF DEVELOPMENT WITH MULTIPROCESSING/MULTITHREADED APPLICATIONS
- FAST, SIMPLE CODE MANAGEMENT AND PROJECT INTEGRATION

SunSoft WorkShop™

SPEED SOFTWARE DEVELOPMENT

SunSoft WorkShop,™ Sun's development software for SPARC™ systems, integrates product suites for individuals and teams of developers who build and support single and multithreaded applications. The suites contain the tools used most often by developers: debuggers, performance analyzers, compilers, and code management tools. Each SunSoft WorkShop suite includes a fast, optimizing SPARCompiler™ language system; multithreaded development tools; SPARCworks™ productivity tools to browse, debug, and tune applications; SPARCworks/TeamWare tools to speed and simplify code management and project integration; and SPARCworks/iMPact™ tools for developing multiprocessing/multithreaded applications.

FEATURES + BENEFITS	DESCRIPTION
Speed development with SPARCworks SPARCworks productivity tools let you quickly examine source code and program structure with Source Browser; find and fix program bugs with Debugger; tune applications for maximum performance with Analyzer; interactively compare source files with FileMerge; efficiently build applications with MakeTool; and integrate your favorite CASE tools with SPARCworks Manager.	WorkShop for C 1.1 Slim Kit: media, on-line documentation, and user license for all SPARC systems
Multiply application performance SPARCworks/iMPact extends SPARCworks functionality by providing support for Solaris' threads. Developers can view and navigate across the application threads, including their lightweight processes, entry points, points of execution, and pending events.	Visual WorkShop for C++ 2.0 Slim Kit: media, on-line documentation, and user license for all SPARC systems
Coordinate team development The workgroup productivity tools included with SPARCworks/TeamWare let your teams work on multiple projects at the same time, building projects in parallel and integrating changes from multiple developers.	WorkShop for FORTRAN 90 1.0 Slim Kit: media, on-line documentation, and user license for all SPARC systems
Build network object applications with WorkShop NEO™ NEOworks™ tools will help you to encapsulate objects for distribution and interoperability, and build object models that are network and location transparent. A rich set of libraries is included to improve quality and productivity, and distributed debugging extensions will enable the debugging of applications across the network.	Workshop NEO Slim Kit: media, on-line documentation, and user license for all SPARC systems
Build graphical user interface (GUI) applications SPARCworks/Visual, part of Visual WorkShop, helps professional developers build Motif GUIs.	Workshop for Fortran 77 Slim Kit: media, on-line documentation, and user licenses for all SPARC systems
	Workshop for Ada single-user pack: media, hardcopy documentation, and user license for all SPARC systems
	SPARCworks Professional Pascal Slim Kit: media, on-line documentation, and user license for all SPARC systems

This is a representative sample of available products. For a complete listing including Multi User Packs and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

- INDUSTRY LEADING COBOL COMPILER FOR THE SOLARIS ENVIRONMENT
- IMPROVES PROGRAMMER PRODUCTIVITY
- CROSS-PLATFORM PORTABILITY
- CLIENT-SERVER APPLICATION DEVELOPMENT

Micro Focus COBOL TOOLBOX

ADVANCED COBOL DEVELOPMENT

Micro Focus COBOL Toolbox contains the industry's leading cross-platform COBOL compiler and code debugger, Animator,™ for the Solaris environment in a tightly-integrated development environment. It supports the highest levels of ANSI standard COBOL syntax along with many other syntax variants including those of IBM mainframe compilers. The integrated development environment provides a highly efficient environment that dramatically improves programmer productivity. Additional tools provided allow developers to rapidly create applications designed for homogeneous and heterogeneous networks.

FEATURES + BENEFITS	DESCRIPTION
Powerful code generation Micro Focus COBOL Toolbox features a processor specific, high-performance code generator for maximum performance as well as highly portable source and intermediate code.	Micro Focus COBOL Compiler, single-user pack, media, documentation, and user license for all SPARC® systems
Versatility saves time Create new applications in a networked environment or downsize applications from proprietary systems or develop applications that run across multiple platforms.	Micro Focus COBOL Toolbox, single-user pack, media, documentation, and user license for all SPARC systems
Full-function debugging Animator is a visual source code debugging tool that allows developers to quickly locate and fix bugs. Keystroke access between the Animator, Editor, and Compiler accelerates application debugging.	Micro Focus COBOL Compiler and Toolbox, single-user pack, media, documentation, and user license for all SPARC systems
	Micro Focus Dialog System, single-user pack, media, documentation, and user license for all SPARC systems
	Micro Focus Operating System Extensions, 10-user pack, media, documentation, and user license for all SPARC systems

This is a representative sample of available products. For a complete listing including Multi User Packs and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

- COMPREHENSIVE DEVELOPER'S PACKAGE WITH SOFTWARE, TOOLS, DEMOS, AND DOCUMENTATION ON A SINGLE CD
- WHITE PAPERS AND NEWSLETTERS INCLUDE IMPORTANT TECHNICAL INFORMATION

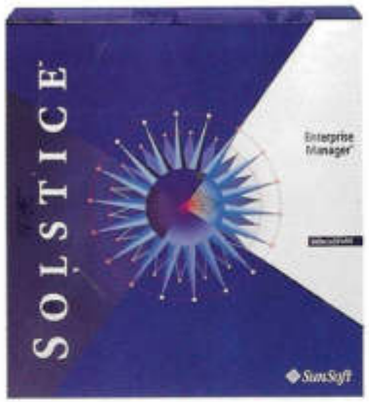
SOFTWARE DEVELOPER'S KIT

COMPLETE DEVELOPMENT PACKAGE ON A SINGLE CD

The Solaris™ Software Developer's Kit (SDK) is a comprehensive developer package that consolidates development software, tools, on-line documentation, sample code, and demos onto a single CD. With the SDK, you can quickly and easily create applications for the Solaris environment. The SDK includes seven components: Solaris Developer AnswerBook,™ Motif Developer's Toolkit, OpenWindows™ Developer's Guide, Devguide Motif Utilities, XIL™ Developer Toolkit, XGL™ Developer Toolkit, and PEX Developer Toolkit. Also included are on-line documentation, technical white papers, and newsletters on a wide range of important topics.

FEATURES + BENEFITS	DESCRIPTION
Quickly create applications for Solaris The SDK lets application developers take full advantage of the power of the Solaris operating environment, including windowing, distributed network services, graphics and imaging, and application integration facilities.	Single-user license, media, documentation, and user licenses for all SPARC® systems
Complete development environment The SDK layers its seven components on top of any of the Solaris runtime products—Solaris Desktop, Solaris Workgroup, or Solaris Enterprise—to provide developers with a complete, robust development environment.	Ten-user license, media, documentation, and user licenses for all SPARC systems

Solstice™
enterprise management



- INTEGRATED PRODUCTS THAT SIMPLIFY THE MANAGEMENT OF LARGE HETEROGENEOUS NETWORKS
- THE FLEXIBILITY OF DISTRIBUTED COMPUTING WITH THE CONTROL OF CENTRALIZED MANAGEMENT
- MANAGES ALL NETWORK RESOURCES
- LOWERS TOTAL COST OF OPERATIONS
- MORE THAN 300 SOLSTICE SOLUTIONS

SIMPLIFYING ENTERPRISE-WIDE SYSTEM AND NETWORK MANAGEMENT

Solstice™ is the industry's first fully integrated solution for managing the complexity of distributed computing. The new software offering delivers the industry's first set of products to scale and manage large heterogeneous networks, such as those in telecommunications and financial services, utilizing distributed computing technologies.

Solstice products decrease the complexity of managing enterprise-wide networks while significantly reducing the total cost of operations, giving you the flexibility of distributed computing with the control of centralized management. The Solstice family includes products designed to manage every resource on your network regardless of vendor, location, platform, or protocol. In addition, the Solstice solutions program simplifies buying decisions by offering a short list of certified solutions from top-tier management ISVs.

THE SOLSTICE™ PRODUCT FAMILY

The Solstice family includes products that cover all aspects of enterprise management:

Solstice AutoClient™ is the industry's first solution for high-performance centralized management of desktops.

Solstice Enterprise Manager™ is the first standards-based, object-oriented, multiprotocol management platform to provide scalability across global networks.

Solstice Site and Domain Manager™ products form a cohesive family of scalable and distributed management platforms for any size mission-critical environment. This encompasses networks ranging in size from tens of nodes to thousands of nodes. The architecture scales by spreading the management processing load around the network. The product family includes Solstice Site Manager, Solstice SunNet Manager, and Solstice Domain Manager.

Solstice FireWall-1™ is an advanced IP firewall that allows connectivity with Internet resources worldwide without compromising internal network security. See page 56 for more information on Solstice FireWall-1.

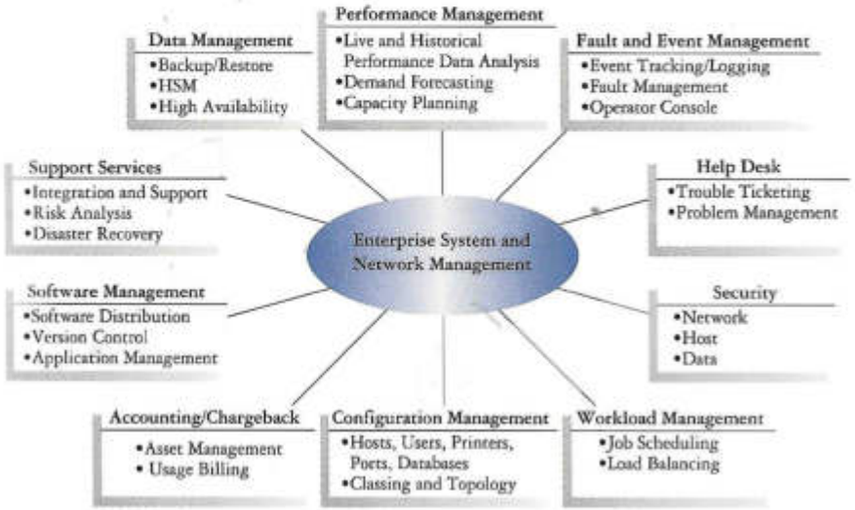
Solstice AdminSuite,™ packaged with the Solaris server environment, is a configuration management tool that provides distributed mechanisms for managing hosts, users, groups, serial ports, databases, and printers.

SolarNet PC-Admin,™ technologies offered within SunSoft's SolarNet™ products, include TCP/IP networking software that delivers high levels of control over MS-DOS and Microsoft Windows PC environments.

Solstice JumpStart,™ bundled within the Solaris environment, automatically installs Solaris environments and applications for systems across the network.

Solstice DiskSuite™ provides the best disk mirroring for Solaris, enhancing capacity, reliability, availability, and performance of disk subsystems.

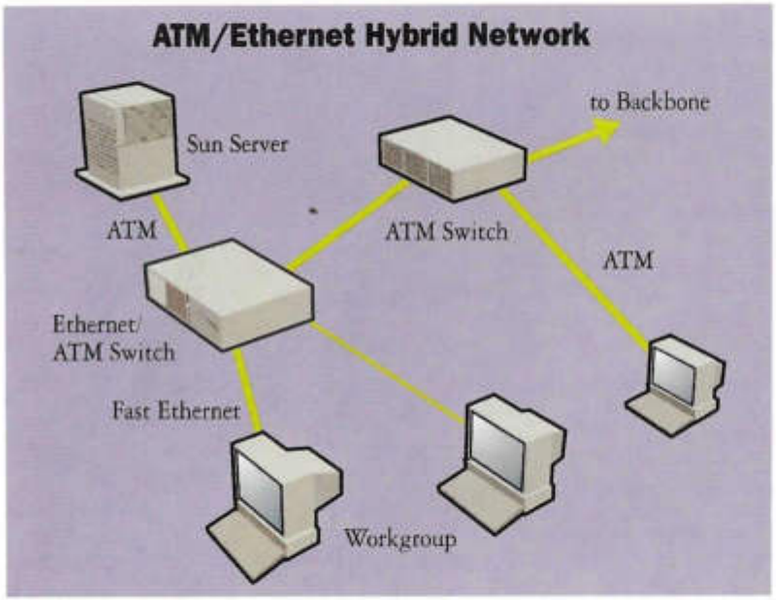
Solstice Backup™ is the leading heterogeneous backup, restore, archiving, and HSM technology for the enterprise, based on Legato Systems' award-winning NetWorker software.



FEATURES + BENEFITS	DESCRIPTION
Fault, event, & performance management The Solstice Enterprise Manager™ is an advanced multiuser, multiprotocol management platform designed for distributed environments.	
Software management Solstice AutoClient™ features a revolutionary approach to centralized management of desktops. A first in the industry, Solstice AutoClient allows system administrators to automatically set up, update, and reinstall desktops across the network without actually visiting an employee's desk, significantly reducing administration time and costs. In addition, Solstice JumpStart™ automates the installation of the Solaris™ operating environment and applications on desktops.	DESCRIPTION Solstice AutoClient for Solaris 2.x Base Pack includes CD-ROM, documentation, unlimited server license, and ten client licenses
	DESCRIPTION Solstice Enterprise Manager 1.2 (OEM/Partners Release) Developer's Kit includes media, documentation, and a single-system license
	DESCRIPTION Solstice Site Manager 2.3 includes Solstice SunNet Manager 2.3 for up to 100 nodes; includes Solstice Cooperative Consoles Sender, media, documentation, and a single-system license
Configuration management Configuration management for Solaris and PC environments is available with Solstice AdminSuite,™ AdminTools,™ and SolarNet PC Admin, respectively. Administrators can configure resources and apply profiles to groups of systems.	DESCRIPTION Solstice SunNet Manager 2.3 for unlimited number of nodes includes Solstice Cooperative Consoles Sender, media, documentation, and a single-system license
Data management Solstice Backup™ supports backup, restore, archive, and HSM services for many UNIX and PC clients. New Oracle Database Module protects Oracle 7™ database. Solstice DiskSuite™ offers disk mirroring, striping, and RAID for high-performance and journaling for quick file system restart and recovery.	DESCRIPTION Solstice Domain Manager 2.3 includes Solstice SunNet Manager, a full Solstice Cooperative Consoles, a new Layout Tool, media, documentation, and a single-system license
	DESCRIPTION Solstice FireWall-1 "Light" Security Center includes license, media, and documentation. Controls Internet access via one gateway for up to 50 systems
Security management Solstice FireWall-1™ controls network access while providing users with secure connectivity to all Internet resources and IP-based services. New Virtual Private Network option secures communication over public networks. (See page 56 for more information on Solstice FireWall-1.)	DESCRIPTION Solstice FireWall-1 Internet Security Center controls Internet access via one gateway for an unlimited number of systems
	DESCRIPTION Solstice DiskSuite 4.0 for Solaris 2.x includes CD-ROM, hardcopy documentation, and a single-user license
	DESCRIPTION Solstice Backup for Solaris 2.x and 1.x, Base Pack includes media, documentation, and license*
	DESCRIPTION Solstice Backup Turbo for Solaris 2.x and 1.x, Advanced Pack includes media, documentation, and license**
	DESCRIPTION Solstice Archive, a license only enabler. Requires Solstice Backup and Turbo

*This is a representative sample of available products. For a complete listing including additional licenses and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller. *For servers with two tape drives. Supports up to two nonconcurrent backup devices and includes a 10-client license. **For larger SPARCserver™ systems with more than two tape drives. Supports concurrent device usage, includes a 10-client license, and supports optional storage library software.*

LAN and WAN
high-performance networking



- **RELIABLE, COST-EFFECTIVE NETWORKING BASED ON WORLDWIDE STANDARDS**
- **ALL THE BANDWIDTH YOU NEED FOR MULTIMEDIA, VIDEOCONFERENCING, AND OTHER EMERGING APPLICATIONS**
- **IMPROVED NETWORK PERFORMANCE**

HIGH-PERFORMANCE NETWORKING

As your company expands, the need to integrate communications across diverse computer systems is critical—not only across domestic sites, but internationally as well. And new advancements in videoconferencing and multimedia technology require data communication links capable of transmitting at higher speeds. Sun offers solutions that enable you to tightly integrate local-area and wide-area networks—and deliver all the bandwidth you need to harness advanced technologies. We provide products for popular LAN standards, including 10-Mb/sec Ethernet, Token Ring, and FDDI, as well as for emerging high-speed networking technologies such as ATM, 100-Mb/sec Fast Ethernet, and ISDN.

DESCRIPTION
SunATM-155/MFiber SBus Adapter
DESCRIPTION
SunATM-155/UTP5 SBus Adapter
DESCRIPTION
SunFastEthernet 10/100 SBus Adapter
DESCRIPTION
SunSwift SBus Adapter (10/100 Ethernet, Fast Wide SCSI-2)
DESCRIPTION
SunFDDI SAS SBus Adapter
DESCRIPTION
SunFDDI DAS SBus Adapter
DESCRIPTION
High-speed serial interface/SBus (HSI/S) for Solaris 2.x
DESCRIPTION
Token Ring Interface/SBus (TRI/S) for Solaris 2.x
DESCRIPTION
PPP 3.0 for Solaris 2.3 and higher, media, documentation, and license
DESCRIPTION
X.25 9.0 for Solaris 2.3 and higher, media, documentation, and license

For a complete listing of available high-performance networking products and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

LAN INTERFACES

SunATM™ adapters offer the lowest cost, highest performance networking solution on the market, ensuring you have all the bandwidth you need to maintain your competitive edge. Transmit not only text and graphics but also voice and video over 155-Mb/sec bandwidth networks, with low latency and high reliability.

SunFastEthernet™ adapters dramatically boost the performance of the world's most popular networking technology, delivering ten times the speed of standard 10-BaseT Ethernet. A simple and standardized solution for adding bandwidth to your existing Ethernet networks, SunFastEthernet is the first dual speed 10/100-Mb/sec Ethernet adapter. And the first in the industry to be built-in on the system board (Ultra 1, Creator 3D 170).

SunSwift™ adapter is the first adapter that offers both 10/100-Mb/sec Ethernet and fast/wide SCSI-2 functionality in the industry. These cost-effective, high-speed networking products not only increase throughput, but also help preserve SBus slots on the system.

SunFDDI™ adapters are industry-standard network interfaces for high-bandwidth FDDI connections. Any SPARC™ system using SunFDDI™ FDDI/S can connect to an FDDI LAN for increased network availability and throughput. Furthermore, the dual-attached SunFDDI offers additional fault tolerant coverage.

SunLink Token Ring interface/SBus provides transparent integration of Sun™ systems into Token Ring networks—the dominant LAN type in commercial environments—with no changes to existing applications.

WAN INTERFACES

SunISDN™ lets remote Sun systems share multimedia resources across existing telephone networks. SunISDN™ is well-suited to many bandwidth-intensive applications, including telecommuting, real-time remote access to corporate database services, image/graphics transmission (for example, CAD/CAM), Internet access, video and document conferencing using a shared whiteboard across ISDN, and emerging applications that blend computer and telephone services.

SunLink high-speed serial interface/SBus facilitates high-speed, wide-area communication for Sun systems. Delivering a balance of high-speed and low-cost connectivity using protocols such as X.25, PPP, Frame Relay, and SNA, it provides four high-speed serial communications ports for SBus-based systems.

SunLink™ Point-to-Point Protocol (PPP), a cost-effective, wide-area networking solution based on the Internet standard PPP, lets Sun customers easily communicate outside their LAN to other LANs or remote sites.

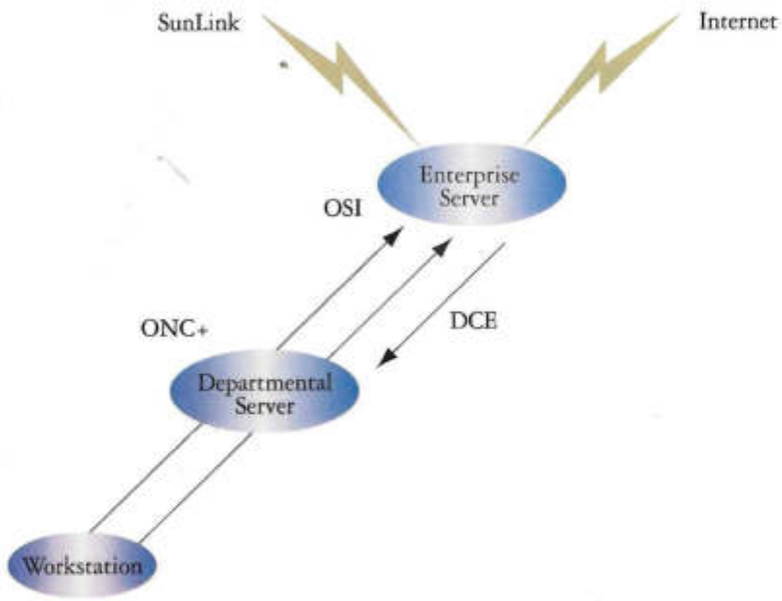
SunLink X.25 lets every Sun™ system on your LAN share resources and applications with another system or LAN across public or private X.25 networks, providing a cost-effective alternative to leased lines for LAN-to-LAN communications.

SunLink Frame Relay provides high-speed access to public or private Frame Relay networks, allowing Sun systems to share resources over a wide-area network.

SunLink X400 extends the range of electronic mail communication for Sun systems. Connecting you to global mail networks supporting the X.400 international standard, SunLink X400 lets you easily communicate with your national or international field offices, trading partners, and suppliers.

Solstice X500 provides a distributed directory system which implements ITU standards. The Solstice X500 product allows users and applications to obtain information from the database/user, application, or device, and store in the directory tree.

Enterprise
Networking software



- SUN IS A GLOBAL NETWORKING LEADER
- IBM AND DEC CONNECTIVITY
- PRODUCTS FROM SUN AND OUR PARTNERS CONNECT YOUR ENTERPRISE ACROSS TECHNOLOGIC AND GEOGRAPHIC BOUNDARIES

ENTERPRISE NETWORKING

In today's complex, fast-paced business environment, companies cannot afford to let users work in isolation. Workgroups need to share information with users throughout the enterprise. Wherever they are—or whatever hardware they use—people must be able to quickly access corporate data. The move from mainframes to client-server environments has made efficient connections between all of the varied components even more critical. Corporate expansion into global markets means that resources must now be shared across continents.

Sun has consistently led the industry in providing solutions for integrating systems from multiple vendors into powerful, heterogeneous networks. Sun pioneered the concept of distributed computing, in which all of an organization's diverse computer resources can be accessed through the user's workstation. We use our expertise in global connectivity and network management to extend distributed computing across worldwide networks and offer an array of software products that make enterprise networking work to your advantage.

NETWORKING SOFTWARE

SunLink™ OSI is a communication platform connecting Solaris™ 2.x systems to all other OSI-compliant systems. SunLink OSI implements a complete set of OSI protocols and supports concurrent connection to X.25, TCP/IP, and local-area networks such as Ethernet and FDDI.

SunLink ASN.1 includes an ASN.1 compiler and sample code. It can be used with SunLink OSI, SunLink CMIP, SunLink FTAM, and SunLink X400 to develop distributed applications that make use of application-specific ASN.1 definitions.

SunLink VT implements the ISO Virtual Terminal specifications ISO 9040 (Telnet) profile, enabling Sun systems to act simultaneously as a VT server and a VT client. It supports concurrently X.25, TCP/IP, and Logical Link Control class 1 networks (Ethernet, FDDI, Token Ring).

SunLink FTAM gives users and developers a tool for bi-directional file transfer and management between remote hosts. It offers a high-level API for developing FTAM-based applications.

Transarc DCE is a robust implementation of the Open Software Foundation's Distributed Computing Environment—a comprehensive, integrated set of services that supports the development, use, and maintenance of distributed computing applications.

MAINFRAME CONNECTIVITY

SunLink SNA3270 Gateway software for Solaris 2.3 or above provides the basic functions of a Physical Unit Type 2.1, including support not only for traditional display emulation and hierarchical connectivity, but for peer-to-peer connectivity and LU6.2 as well. The TN3270 server is bundled. Additional session and Telnet 3270 client licenses are available.

SunLink Client 3270 9.0 for Solaris 2.3 or above is an SNA3270 device emulator for 3278 (Models 2 through 5), 3279/3179 color display stations, and 3287 printers. Licenses require a SPARC system, SunLink SNA 3270 9.0 Gateway, and appropriate session licenses.

SunLink CG3270 for Solaris™ 2.3 or above is an SNA 3270 emulator for 3278 (Models 2 through 5), 3279 color display stations, 3179G graphics support, and 3287 printers. Licenses require a SPARC™ system, SunLink SNA3270 9.0 Gateway, and Solaris 2.3 or above.

SunLink SNA 3770/RJE is an SNA 3770 emulator for an IBM 3776 workstation device used for remote job entry and batch file transfer over SNA networks.

SunLink LU0 is an API that includes library routines, which allow a user to write programs to interact with IBM mainframe applications.

SunLink Peer-to-Peer supports both the LU6.2 Transaction Programmer's Reference and the Common Programming Interface for Communications verb sets, allowing a user to write transaction programs to interact with both IBM mainframe and SNA peer applications. SunLink PTP RunTime consists of peer-to-peer run-time libraries only without the complete development system.

SunLink SNA/SNM captures events generated by SunNet Manager™ and reports these events as SNA alerts to IBM's NetView for logging and analysis.

SunLink BSC3270 provides compatibility with mainframes that conform to IBM's Binary Synchronous protocol (BSC), including emulation of an IBM cluster controller. SunLink Client3270 permits users to add Client3270 connections to SunLink BSC3270.

SunLink DNI allows Sun systems and servers to communicate and share resources with DEC VAX, Pathworks, and PDP-11 using DECnet Phase IV protocols. Typical SunLink DNI applications include remote login, file transfer, mail, printing, and remote directory listing.

SunLink TE320 provides DEC VT320 terminal emulation, allowing Sun™ system users to access DEC applications in an OpenWindows™ environment.

DESCRIPTION
SunLink OSI 8.1 for Solaris 2.x, media, documentation, and single-system license
DESCRIPTION
SunLink ASN.1 1.0, media, documentation, and license for all SPARC systems
DESCRIPTION
SunLink VT 8.0, media, documentation, and single-system license for all SPARC systems
DESCRIPTION
SunLink FTAM 8.0.1 for Solaris 2.x, media, documentation, and system licenses
DESCRIPTION
Transarc DCE, media, documentation, and license
DESCRIPTION
SunLink SNA3270 9.0 for Solaris 2.x, media, documentation, and 16-session license for all SPARC systems and one Client 3270 9.0 RTU
DESCRIPTION
SunLink Client 3270 8.0, 8 client RTU
DESCRIPTION
SunLink Client 3270 9.0, 8 client RTU for Color Graphics (GDDM)
DESCRIPTION
SunLink CG3270 9.0 for Solaris 2.x, one-client license
DESCRIPTION
SunLink SNA 3770/RJE 9.0, media, documentation, and session license for all SPARC systems
DESCRIPTION
SunLink LU0 9.0, media, documentation, and session license for all SPARC systems
DESCRIPTION
SunLink SNA Peer-to-Peer Gateway 9.0 for Solaris 2.x, media, documentation, and single-gateway license for all SPARC systems

This is a representative sample of available products. For a complete listing including Multi User Packs and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

DESCRIPTION
SunLink SNA Peer-to-Peer RunTime 9.0 for Solaris 2.x, media, documentation, and single-session license for all SPARC systems
DESCRIPTION
SunLink SNA/SNM 9.0, media, and documentation for all SPARC systems
DESCRIPTION
SunLink BSC3270 8.0 for Solaris 2.x, media, documentation, and single-gateway license for all SPARC systems
DESCRIPTION
SunLink DNI 8.0 for Solaris 2.x, media, documentation, and single-system license for all SPARC systems
DESCRIPTION
SunLink TE320 8.0 for Solaris 2.x, media, documentation, and single-session license for all SPARC systems
DESCRIPTION
X.400 9.0 for Solaris 2.4 and higher, license only
DESCRIPTION
X.500 1.0 for Solaris 2.4 and higher, license only

Solstice™

PC-Networking software

- COST-EFFECTIVE INTEGRATION AND ADMINISTRATION OF DISPARATE PC-LAN NETWORK OPERATING ENVIRONMENTS
- ACCESS TO NETWORK RESOURCES FROM FAMILIAR DESKTOP ENVIRONMENTS
- ENHANCED PC AND DESKTOP PERFORMANCE
- ADDS PROVEN INTERNET TECHNOLOGY TO PC NETWORKS, DELIVERING UNLIMITED SCALABILITY AND UNPRECEDENTED INTEROPERABILITY

INTEGRATE YOUR PC AND DESKTOP COMPUTERS INTO YOUR ENTERPRISE NETWORKS

Solstice™ PC-Networking leverages your two most important assets, information and people. We make more information available to more people regardless of platform or place. We reduce the time users and administrators spend using and running their PC LAN/WAN systems.

Information is the most valuable asset in most organizations. Often that information is spread among proprietary PC LANs, UNIX™ file systems, and now Internet solutions. Solstice PC-Networking delivers an intranet that works with the legacy LANs, NetWare™ and LAN Manager.™ Because all Solstice PC-Networking products use the open Internet and UNIX protocols, you get proven scalability to millions, support for roaming or distant users, and a guarantee of non-obsolescence.

Proprietary networks don't scale and hence waste user's and administrator's time. Solstice PC-Networking uses powerful, real-world tested technology for administration. Solstice PC-Networking saves over $1000 per user per year in administration labor. Increased end-user productivity has much larger benefits.

Solstice PC-Networking provides solutions at the Solaris™ server level, at the PC-desktop level, and even at the Solaris desktop. Thus, our solution adapts to your needs.

THE SOLSTICE PC-NETWORKING FAMILY NOW INCLUDES THE FOLLOWING:

PC-Admin™ provides the most complete set of installation, configuration, and administration tools for PCs.

PC-NFS™/PC-NFSpro,™ the industry's leading TCP/IP and NFS™ solution for Microsoft Windows users, allows access to Internet services.

PC-X provides X windows capabilities for remote PC users.

SolarNet WebScout™ provides Netscape Navigator, an SMTP/POP3/MIME e-mail client, plus ftp to access Internet Services.

LAN Client™ allows Solaris users to access NetWare and LAN Manager servers for application, file, and print services.

NW Server gives NetWare users the ability to transparently access and use Solaris applications and file and print capabilities.

PC Protocol Services,™ a NetWare IPX/SPX-compatible protocol stack for Solaris, lets NetWare users access key applications, such as corporate databases, that reside on Solaris servers.

LM Server provides LAN Manager users the ability to transparently access and use Solaris applications, files, and print capabilities.

Solaris™ PC-Compatibility Solutions

SUN'S PC AND DESKTOP INTEGRATION PRODUCTS INCLUDE THE FOLLOWING:

Wabi™ 2.1 is a high-performance translation software product that enables SPARC®/Solaris™ users to run the most popular Microsoft® Windows 3.x productivity applications on their desktop. Because it is tightly integrated with the Solaris operating environment and native UNIX™ applications, Wabi™ software lets users take advantage of available network resources, such as file management and printing. Users gain the power and flexibility of UNIX without sacrificing investments in PC applications and training. And Wabi improves the value of Windows applications by allowing them to take advantage of Solaris performance and features. Wabi also enables users to perform cut-and-paste and drag-and-drop functions between Microsoft Windows and Solaris applications, providing the most efficient use of time and resources. Wabi is co-packaged with the Solaris operating environment.

SoftWindows emulation software allows most other Microsoft Windows programs, MS-DOS® legacy applications, and software developed in-house to run on SPARC workstations.

SunPC,™ with use of a co-processor, provides increased functionality and capabilities to your SPARC workstation. SunPC and SoftWindows complement our Wabi translation software. This new level of integration means you can run applications residing on both UNIX and Novell® NetWare® LANs. To share information between MS-DOS and UNIX windows, just copy and paste. Plus, you can access both UNIX and NetWare network resources, such as printers and file systems—all from your PC applications.

The Internet
and the intranet

WORKING INSIDE AND OUTSIDE YOUR COMPANY

When other companies were still looking at computers as stand-alone personal productivity tools, Sun stated its vision as, "The network is the computer." For more than a decade now, we've made our name promoting the principles and technologies on which the Internet is based—open network computing, the UNIX™ operating system, and TCP/IP network protocols. And we've used those same technologies to run our business, right from the start.

So it should come as no surprise that more Web servers carry the Sun brand and use Sun's robust UNIX operating environment than any other. Or that 75 percent of all Internet service providers use Sun solutions. Small wonder that *Business Week* recently named Sun "King of the Internet."

Sun's position as the Internet platform of choice stems from a variety of factors. Our network-oriented product family features the number one UNIX operating environment, Solaris,™ and the leading RISC architecture, SPARC.® Our multiprocessing servers, robust software, and Netra Internet Servers provide all the power you'll need to take full advantage of Internet resources and opportunities. And, of course, our revolutionary invention, Java.™

Our object-oriented, platform-independent programming language, Java, is the first language to provide a comprehensive solution to the challenges of delivering applications across private or public networks and allows developers to create dynamic Web pages more lively than a CD-ROM.

And while the Internet is justifiably gaining popularity as a valuable business tool, some of the greatest business advantages come from what we call the intranet.

Your highly confidential data can be distributed to an internal audience on a need-to-know basis—and all material can be updated instantly. By using a standard Web browser, you ensure all applications have a consistent appearance to your end users, keeping training costs down. Since Web applications can be run on whatever desktop systems you already have in place, your investment in everything from PCs to UNIX workstations is protected.

Add to that the fact that Web technology enables your people to collaborate with each other at a fraction of the cost of groupware solutions and that it speeds development and deployment of software applications, and it's easy to see how Web-based computing can make your whole company more competitive.

sun
Where the network is going ...
Around the World in 24 Hours.
HotJava™: The Interactive, Animated Web Browser
See it at SunWorld '95, then read about how some hot new companies are using it to make money on the Web. more...
What's happening...
Products & Solutions
Sales & Service
Technology & Developers
Corporate Overview

PROVEN PRODUCTS FOR WHATEVER YOU WANT TO DO

As the leader in network computing, we are the only company to offer a full range of products to help you take advantage of Internet resources and opportunities, both inside and outside your company. In addition to our complete line of scalable multiprocessing servers and high-performance workstations, we provide the following products and services:

INTEGRATED SOLUTIONS AND SERVERS

Netra™ Internet Server. The most powerful, secure, easy-to-manage Web server for the Enterprise, the Netra Internet Server is a fully integrated Internet/intranet server with complete pre-installed Web services and security software.

Sun MediaCenter™ Server Series. The industry's first scalable, manageable, and affordable video server family.

Solaris.™ The leading UNIX® operating system, Solaris delivers the highest networking performance in the industry.

Java.™ With 40,000 licensees and counting, Sun's cross-platform, object-oriented programming language is revolutionizing network computing by making it more interactive.

Java Developers Kit. Specifications, documentation, and tools to help developers write applets that conform to the applet API for the Java programming language.

CLIENT-SIDE SOFTWARE

HotJava™ browser. By enabling small programs to be securely downloaded and executed on the fly, the HotJava browser makes real-time interactivity possible.

SolarNet™ WebScout™ browser. Brings flexible Internet access to both desktop and remote users of Microsoft Windows PCs.

Internet Gateway. For users of x86 and Pentium platforms, Sun makes available Internet Gateway for Solaris.

SECURITY

Solstice SunScreen.™ Enabling companies to establish virtual private networks on the Internet—in addition to protecting their internal networks—Solstice SunScreen delivers unprecedented security.

Solstice FireWall-1.™ Highly sophisticated yet easy to manage, Solstice FireWall-1 enables your company to implement a customized security policy.

INTERNET COMMERCE

Netscape Enterprise Server. For creating, managing, and intelligently distributing information throughout an enterprise or across the Internet, Sun offers Netscape Enterprise Server, which uses state-of-the-art tools based on the Java programming language.

Netscape Commerce Server. When you're ready to do business on the World Wide Web, Sun provides Netscape Commerce Server—powerful software for secure transactions between you and your customers.

Netscape Communications Server. For posting product and service information on the Internet, Sun offers Netscape Communications Server software.

Netra™ i

Netra Internet Server

- SECURE: INCLUDES FIREWALL SOFTWARE
- POWERFUL: SCALABLE Ultra SERVER FAMILY FOR THE ENTERPRISE
- EASY TO MANAGE: INSTALLATION TAKES LESS THAN 30 MINUTES, AND HTML-BASED ADMINISTRATION TOOLS MAKE DAY-TO-DAY SERVER MANAGEMENT EASY
- COMPLETE: EVERYTHING NEEDED TO SET UP A WEB SERVER AND ACCESS THE INTERNET
- EXTENSIBLE: SUPPORTS WEB-BASED SOFTWARE FROM LEADING SOFTWARE VENDORS

LAN TIMES PRODUCTS OF THE YEAR

PC MAGAZINE EDITORS' CHOICE™
October 10, 1995
Sun Netra Internet Server

THE MOST POWERFUL, SECURE, EASY-TO-OPERATE WEB SERVER FOR THE ENTERPRISE

Sun's scalable Netra™ Internet Server family is optimized for high-volume Web serving on your private intranet or the public Internet. Built-in FireWall-First! software provides security for your server and your network through packet-level filtering capabilities. In addition, SunScreen™ SPF-100 security servers can be added to your network to provide high-end security for commerce applications and large corporate gateways. The unique Netra graphical setup and administration software makes server installation and configuration quick while lowering deployment costs. The HTML-based graphical user interface makes day-to-day administration easy—even in branch offices or remote locations with limited personnel and expertise. PC, Novell,™ Macintosh,™ and UNIX™ client stations are supported via TCP/IP or SPX/IPX, further simplifying administrative issues and lowering costs. And the Netscape Enterprise Server, LiveWire, and Netscape Navigator Gold, the premier authoring solution for the Web, are also included. Designed for mission-critical enterprise applications, the Netra Internet Server is reliable, secure, and has the power to scale as your Web volume grows.

FEATURES + BENEFITS

Ready to publish
Web server capabilities that enable your business to publish on your private "intranet" or on the public Internet are fully integrated. And the scalable Netra i family—from SPARCstation™ 4 to Ultra 1™—can fit your needs today and grow with you, whether you are a small organization or a Fortune 500 enterprise that needs access to terabytes of disk storage and processing power for millions of server "hits" each day.

Secure and easy to manage
Built-in firewall software provides security for your network through advanced packet-level filtering capabilities. It's all managed through an easy-to-use graphical user interface.

Complete and extensible
Complete because all the hardware and software you need to get started is pre-installed and fully integrated for high reliability. And all client types are supported—PC, Novell, Macintosh, and Unix workstations on LANs running TCP/IP or IPX/SPX protocols.
Extensible because you can add the software you need to specialize the server and develop custom Web applications using a wide range of powerful third-party Web-based software from leading vendors.

Backing you can count on
Backed by Sun Internet consulting and education services, a wide network of resellers, and an Internet Partner Portfolio of more than 100 Internet application vendors, such as Netscape, Oracle, Informix, and Computer Associates.

DESCRIPTION
Netra i 4, SPARCstation 4, 110-MHz microSPARC-II processor, 32-MB memory, 1.05-GB internal SCSI disk, plus (*)
DESCRIPTION
Netra i 5, SPARCstation 5, 110-MHz microSPARC-II processor, 32-MB memory, 2.1-GB internal SCSI disk, 17-inch monitor, TGX frame buffer, plus (*)
DESCRIPTION
Netra i 1/140, Sun Ultra 1, 143-MHz UltraSPARC processor, 64-MB memory, 2.1-GB internal SCSI disk, plus (*)
DESCRIPTION
Netra i 1/140, Sun Ultra 1, 143-MHz UltraSPARC processor, 64-MB memory, 2.1-GB internal SCSI disk, 17-inch monitor, TGX frame buffer, plus (*)
DESCRIPTION
Netra i 1/170E, Sun Ultra 1, 167-MHz UltraSPARC processor, 64-MB memory, 2.1-GB internal SCSI disk, 17-inch monitor, Creator graphics, plus (*)
DESCRIPTION
Netra i 150, Sun Ultra 1, 167-MHz UltraSPARC processor, 64-MB memory, 4.2-GB internal SCSI disk, plus (*)
DESCRIPTION
Netra i 5000, Rack-mountable UltraSPARC configuration(s) to be announced
DESCRIPTION
Base software upgrade; Solaris 2.5, Netra software 3.0
DESCRIPTION
Full software upgrade; Solaris 2.5, Netra software 3.0, Netscape Enterprise Server, Firewall-First!, IPX/SPX software

(*) CD-ROM, floppy, Solaris 2.5, Netra software 3.0, Netscape Enterprise Server, Firewall-First!, IPX/SPX software pre-installed

This is a representative sample of available configurations. For a complete listing of available configurations and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

Sunscreen™ SPF-100

- TURNKEY, DEDICATED "BLACK BOX" NETWORK SECURITY SOLUTION
- SECURES ENTERPRISE NETWORKS THROUGH STATE-OF-THE-ART STATEFUL PACKET SCREENING
- ENABLES SECURE COMMUNICATIONS OVER PUBLIC NETWORKS WITH ENCRYPTION AND PUBLIC KEY CRYPTOGRAPHY

SunScreen™ SPF-100—SUN'S SECURE NETWORK SOLUTION

By providing privacy of your data and authenticating the identity of those you communicate with, the SunScreen™ product line enables you to realize the promise of doing business over global public networks.

At the heart of SunScreen is a dedicated network device that integrates next generation, stateful packet screening with authentication and privacy using Simple Key Management for Internet Protocol (SKIP). SKIP handles key management automatically and works at the network (IP) layer allowing applications to be used securely without modification.

As your complete network security solution, SunScreen comes with the hardware, software, training, installation, and configuration services and unmatched technical support to ensure that it's customized to meet your company's security needs.

FEATURES + BENEFITS

Turnkey, dedicated black box
The SunScreen embedded OS was developed specifically for security, removing the ability to execute unknown software. Typical "firewall" products based on a "secured" general purpose OS are still vulnerable to security holes.

Transparent to network and applications
Because SunScreen examines each IP packet, the standard network layer protocol on which many higher-level application protocols are built, no change is required to existing applications running on the network.

"Stealth" design
The Ethernet ports on the SunScreen used for screening packets have no IP addresses, making the SunScreen SPF-100 invisible to the network and hackers.

Stateful dynamic packet filtering
This advanced packet screening technology combines the performance of packet screens while retaining application-level intelligence. The SPF-100 can filter on any current Internet service or a user-definable service allowing the support of any future standards.

Encryption for privacy and authentication
The integration of encryption software enables SunScreen to be used for authenticated, private communication that can support multiple, secure, virtual private networks over public networks.

Secure, authenticated administration
Allows for remote management of SPF-100s. Multiple SPF-100s may be securely managed remotely by a single SunScreen Administration Station, or a single SPF-100 can be securely managed by multiple SunScreen Administration Stations.

DESCRIPTION

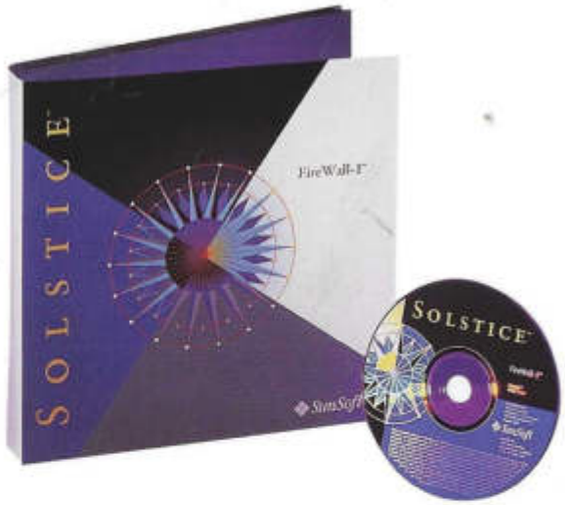
SunScreen SPF-100—dedicated hardware device based on microSPARC-II technology, 3.5-inch diskette, CD-ROM 32-MB main memory, 1-GB disk, four Ethernet interfaces, one Secure Administration Interface, Embedded OS, Stateful, Dynamic Screening of TCP services, Key/Traffic encryption (RC2, RC4, DES)

DESCRIPTION

SunScreen Administration Station—Pentium, 10-BaseT Ethernet, ISA-bus machine, 15-inch monitor, SVGA, 8-MB main memory, 540-MB disk, 3.5-inch diskette, keyboard, 2-button mouse, SunScreen GUI software, Configuration Editor, SunScreen Manager, Log Browser, SKIP Host, Certificate Manager

This is a representative sample of available configurations. For a complete listing of available configurations and ordering information, please contact your local Sun Microsystems sales office or authorized Sun Reseller.

Solstice™ FireWall™-1



- GUI FOR EASE OF INSTALLATION, OPERATION, AND CONTROL OF FireWall-1
- PATENT-PENDING ADVANCED PACKET FILTER TECHNOLOGY
- POWERFUL LOGGING AND ALERTING SYSTEM
- ENCRYPTION (ONLY IN 2.0 VPN)
- NETWORK ADDRESS TRANSLATION
- HTTP AUTHENTICATION
- USER AUTHENTICATION
- BAY NETWORKS WELLFLEET AND CISCO ROUTER SUPPORT
- SNMP SYSTEM STATUS AND ALERTS
- CLIENT AUTHENTICATION*

FULL INTERNET CONNECTIVITY WITH SECURITY; INCORPORATING ADVANCED USER AUTHENTICATION, ENCRYPTION, AND ENTERPRISE-WIDE MANAGEMENT

Solstice™ FireWall™-1 is a comprehensive security tool that allows an organization to access the Internet's vast worldwide resources without compromising internal network security. This highly sophisticated, yet very simple to manage software package enables an enterprise to easily build its own customized security policy. Solstice FireWall-1 Version 2.0 incorporates dynamic, application-level filtering capabilities, advanced user authentication and encryption. It enables true connectivity with security for over 100 built-in services, including secure Web browsers, FTP, the entire UDP family, Mbone, RealAudio, and others.

Solstice FireWall-1 incorporates the latest set of security features supporting anti-spoofing enhancements and a unique combination of network and application level security. Combined with a user friendly GUI (Graphical User Interface), these features make Solstice FireWall-1 the most comprehensive and reliable enterprise-ready network security tool available today.

FEATURES + BENEFITS

Combined network and user-level security

Solstice FireWall-1 enables an organization to take full control over all its Internet traffic. Employing a powerful combination of advanced, patent-pending filtering and user authentication technologies, it inspects each communication attempt, promptly blocking all unwanted tries. A robust auditing and alerting mechanism identifies and flags any suspicious communication. Users and clients can be authenticated by various smart card or soft key solutions, such as SecurID by Security Dynamics Inc., or S/key. User authentication is fully integrated into the GUI, providing user access locations, time access permits, and record expiration.

Full control and transparency

Solstice FireWall-1 guarantees full transparent connectivity to authorized network users and applications. Communication attempts can be blocked, forwarded, logged, or used to activate alerts, according to customer specifications. The user's network performance is unaffected, as is the software and hardware setup, which requires absolutely no alteration.

Leading edge technology

Solstice FireWall-1 incorporates the connectivity and transparency of packet filters with the security level of application gateways. Solstice FireWall-1 implements a unique (patent pending) dynamic filtering technology. It operates using a programmable filter module, which accesses data contained in all communication levels. Data extracted from the communication packets is stored in dynamic tables, keeping updated state and context information. Solstice FireWall-1 uses a scripting language, giving maximum flexibility for existing and new protocols and services. Solstice FireWall-1 technology achieves not only top-rated security, but also the highest performance levels of today's networks. By eliminating costly data copying and context switch operations, delay latency is virtually unaffected, and bandwidth is kept to a maximum.

Easy-to-build security policy

Solstice FireWall-1 introduces a new level of easy-to-achieve network security and implementation. An intuitive object-oriented GUI and advanced heuristics check for inconsistencies and assist the system manager in defining a set of rules that implements the organization's particular security policy. All traffic not allowed by the rules is blocked by default. Security rules are enforced on all communications passing through key locations in the network (Internet gateway, servers, etc.) using filter modules that operate inside the system kernel. The entire family of IP protocols and services can be secured, including TCP, UDP, RPC, and ICMP.

Simple, enterprise-wide operation

Solstice FireWall-1 allows the system manager to control, operate, and monitor the organization's entire network security layout from the manager's own workstation.

Virtual private network (VPN)

Solstice FireWall-1 2.0 VPN provides completely transparent selective encryption to enable a Virtual Private Network for a wide range of services. Encryption, decryption, and key management are all seamlessly integrated with other Solstice FireWall-1 features.

Flexible support capabilities

Solstice FireWall-1 can easily coexist with and complement existing security products. It runs on industry-standard Intel x86 or Sun Microsystems SPARC systems using SunOS 4.1.3 or Solaris 2.3 and above.

DESCRIPTION
FireWall-1 Light Security

DESCRIPTION
FireWall-1 Internet Security

DESCRIPTION
FireWall-1 Auth. Insp.

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Sun

The Network is the Computer™

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